Riparian Hardwoods Restoration and Enhancement Burton Creek State Park, D.L. Bliss State Park, Ed Z'berg-Sugar Pine Point State Park, Ward Creek Unit, and Washoe Meadows State Park

Draft Initial Study/Environmental Assessment
January 2007

Prepared by

California Department of Parks and Recreation
Sierra District, Resources Office
Tahoe City, California

Bureau of Reclamation
Mid-Pacific Region
Sacramento, California

This page left blank intentionally

General Information about this Document

What's in this Document:
The California Department of Parks and Recreation (DPR) and the United States Department of the Interior, Bureau of Reclamation (USBR) have prepared this Initial Study/Environmental Assessment to examine the potential environmental impacts of the alternatives being considered for the proposed Riparian Hardwoods Restoration and Enhancement project at Burton Creek, D.L. Bliss, Ed Z'berg-Sugar Pine Point, and Washoe Meadows State Parks and the Ward Creek Unit in Placer and El Dorado Counties, California. The document describes why the project is being proposed, alternatives for the project, the existing environment that could be affected by the project, the potential impacts from each of the alternatives, and measures proposed to avoid, minimize and/or mitigate potential adverse effects on the environment.

What you should do:
Please read this Initial Study/Environmental Assessment (IS/EA). Additional copies of this document as well as the technical studies are available for review at:

- Northern Service Center
  California Department of Parks and Recreation
  One Capitol Mall – Suite 410
  Sacramento, CA 95814
- Sierra District Office
  California Department of Parks and Recreation
  7360 West Lake Blvd.
  Tahoma, CA 96142
- Placer County Library
  Tahoe City Branch
  740 North Lake Blvd.
  Tahoe City, CA 96145
- El Dorado County Library
  South Lake Tahoe Branch
  1000 Rufus Allen Blvd.
  South Lake Tahoe, CA 96150
- California State Parks Internet Website
  www.parks.ca.gov/default.asp?page_id=981

For individuals with sensory disabilities, this document can be made available in large print or on compact disk.
To obtain a copy in one of these alternate formats, please contact the Environmental Coordinator listed below.

We welcome your comments. Questions or comments regarding this Initial Study/Environmental Assessment should be submitted to:

Tamara Sasaki
California Department of Parks & Recreation
Sierra District Resource Office
P.O. Box 16, Tahoe City, CA 96145-0016

E-mail Address: tsasaki@parks.ca.gov
Include "Riparian Hardwoods Restoration and Enhancement" on the subject line
Fax Number: 530/581-5849

Submissions must be in writing and postmarked, or received by fax or e-mail, no later than **February 7, 2007**. The originals of any faxed document must be received by regular mail within ten (10) working days following the deadline for comments, along with proof of successful fax transmission.

What happens next:
After comments are received from the public and reviewing agencies, DPR and USBR may:
(1) give environmental approval to the proposed project, (2) undertake additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is appropriated, DPR could design and construct all or part of the project.

List of Acronyms

BMPs	Best Management Practices
CalTrans	California Department of Transportation
CARB	California Air Resources Board
CCC	Civilian Conservation Corps
CDC	California Department of Conservation
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CTC	California Tahoe Conservancy
DFG	California Department of Fish and Game
DPR	California Department of Parks and Recreation
EA/IS	Environmental Assessment/Initial Study
EIR	Environmental Impact Report
ºF	Degrees Fahrenheit
FPPA	Farmlands Protection Policy Act
FONSI/ND	Finding of no significant impact/negative declaration
GLO	Government Land Office
NAHC	Native American Heritage Commission
NEPA	National Environmental Protection Act
NHPA	National Historic Preservation Act
RWQCB	Regional Water Quality Control Board
SEZ	Stream Environment Zone
SMP	Smoke Management Plan
SP	State Park
TRPA	Tahoe Regional Planning Agency
TYC	Tahoe Yellow Cress
USBR	United States Bureau of Reclamation
USDI	United States Department of the Interior
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service

Initial Study with Proposed Mitigated Negative Declaration/ Environmental Assessment

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2) (C)

THE STATE OF CALIFORNIA
Department of Parks and Recreation

_____
Date of Approval

_____
Theodore L. Jackson, Jr.
Deputy Director
Park Operations Division
California Department of Parks and Recreation

This page left blank intentionally

PROPOSED MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, California Public Resources Code

Project Description

The California Department of Parks and Recreation (DPR) proposes to restore and enhance approximately 200 acres of riparian forests by removing encroaching conifers and remove approximately 0.5 mile of unnecessary roads, skid trails, and way trails that are sediment sources in the riparian corridors within 844 identified acres at Burton Creek, D.L. Bliss, Ed Z'berg-Sugar Pine Point, and Washoe Meadows State Parks and Ward Creek Unit. If future funding becomes available, DPR would treat additional acres within the 844 acres identified.

Work throughout the park units would include:

- Removal of encroaching conifers in up to 200 acres in the identified riparian corridors using manual removal with hand crews and/or heavy equipment over snow.
- DPR registered professional forester would determine thinning prescription on a site by site basis based on: riparian forest health, ability to remove felled trees and associated tree debris, and in consultation with regulatory agencies and DPR cultural and natural resources staff.
- Removal of encroaching conifers in the riparian corridor manually by hand crews.
- Removal of encroaching conifers in the riparian corridor may be completed using heavy equipment over snow at three parks:
  - Sugar Pine Point State Park up to 41 acres
  - D.L. Bliss State Park up to 4.5 acres
  - Washoe Meadows State Park up to 28 acres
- Removal of felled trees and debris out of riparian corridor for pile burning, chipping, or disposal depending on vehicle accessibility. DPR would write a smoke management plan (SMP) that includes identifying smoke sensitive areas (i.e., residences in project vicinity, schools, etc.) and submit it to the appropriate air quality regulator, El Dorado Air Quality Management District or the Placer Air Pollution Control District, for approval. The air quality regulator would limit the timing, location, amount and extent of burning to minimize possible adverse effects to sensitive receptors.
- Pile burning would be done in designated areas agreed upon by regulatory agencies and DPR natural and cultural resources staff.
- Obliteration and rehabilitation of approximately 0.5 miles of skid road, skid trail, and way trails in the riparian corridor. See Appendix C for trail removal and obliteration specifications. This may include hand crews and/or heavy equipment.

Determination

This proposed Draft Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that DPR intends to adopt a MND for this project. This does not mean that DPR's decision regarding the project is final. This MND is subject to modification based on comments received by interested agencies and the public.

DPR has prepared an Initial Study for this project, and pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed Riparian Hardwoods Restoration and Enhancement Project would result in no effect on agricultural resources, land use and planning, mineral resources, population housing, public services, recreation, transportation/traffic, and utility and service systems.

The proposed project would have less than significant effects on aesthetics, hydrology and water quality, and noise.

The proposed project would have no significant adverse effect on air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials because the following mitigation measures would reduce potential effects to insignificance:

Human Environment

Avoidance Measure CULT-1: Protected Areas

All historic properties are assumed eligible for the National Register and would be protected throughout the duration of the project.

Cultural resources within the units scheduled for treatment would be flagged no more than 30 days prior to commencement of the vegetation management activities in the field. Designated flagging color would demarcate areas of avoidance. If project delays occur which exceed the 30-day limit to commencement of field activities, a qualified DPR archaeologist and/or DPR Registered Professional Forester would check flagging to assure that it is still visible prior to field activities.

Avoidance Measure CULT-2: Pre-Start Meetings

Prior to beginning project work, the DPR archaeologist, project manager, and hand crew leader(s) and/or over-snow contractor would meet on the project site to discuss project implementation and recommendations/conditions.

Avoidance Measure CULT-3:

Debris piles would be located outside of delineated archaeological site or linear feature boundaries. Pile burning within these archaeological sensitive areas is prohibited unless otherwise approved by the DPR archaeologist.

Avoidance Measure CULT-4:

No vehicles or heavy equipment within archaeological exclusion zones.

Avoidance Measure CULT-5:

Conifer tree removal would be limited to hand clearing in areas within and adjacent to recorded archaeological sites and cultural resource features. Manual removal would take place first in areas of identified resources and work outward to fully identify and protect the newly documented and/or extended resources.

Avoidance Measure CULT-6: Archaeological Discovery Provisions

- In the event of an unanticipated discovery of previously-undocumented cultural resources during the project activities, work would be suspended in the area until a DPR archaeologist has assessed the find and has developed and implemented appropriate avoidance, preservation, or recovery measures prior to any work resuming at that specific location.
- In the event that human remains are discovered during project activity, work will cease immediately in the area of the find and the project manager/site supervisor will notify the appropriate DPR personnel. Any human remains and/or funerary objects will be left in place. Existing law requires that project managers contact the County Coroner. If the remains are determined to be of the Native American origin, both the Native American Heritage Commission and any identified descendants shall be notified. (Health and Safety Code Section 7050.5, Public Resources Code Section 5097.97 and 5097.98). DPR staff will work closely with USBR to ensure that its response to such a discovery is also compliant with federal requirements including the Native American Graves Protection and Repatriation Act.

Physical Environment

Avoidance Measure WATER-1

Vehicles to stay on existing roads in SEZ areas during hand crew operation.

Minimization Measure WATER-2: Hand Crew Tree Felling and Removal

Use hand crews and/or heavy equipment over-snow to remove encroaching conifers in the riparian areas.

- Hand crews would begin work in late Fall when SEZ soils are driest.
- Hand crews would not cross streams when manually hauling out trees and associated tree debris.
- Hand crews would fell trees away from the creek.
- Hand crews would avoid creating permanent trails and take precautions to prevent damage to soil (compaction or erosion) and non-target vegetation in SEZs.

Minimization Measure WATER-3: Over-Snow Tree Felling and Removal

- Over-snow heavy equipment would not be allowed closer than 25 feet to a creek or stream.
- Over-snow heavy equipment would not be allowed to cross a creek or stream, if there could be potential impacts to the stream bank. Conditions for crossing a creek or stream would be if the watercourse is completely covered by snow, has no water flow, and the snow pack of sufficient depth and hardness to prevent breaking through. The creek or stream center would be flagged at the over-snow treatment units.
- Over-snow heavy equipment would only be allowed to work when sufficient snow pack and environmental conditions would protect underlying wet soils and vegetation.
- Over-snow landings would be place when possible in previous landing sites or disturbed areas. Best Management Practices would be in place if the landing is not cleared of logs prior to snow melt. Over-snow landings would be decompacted and mulched with local, native materials and/or woodchip.
- Non-target riparian vegetation would be protected from damage from over-snow removal of conifers.
- SEZs would be marked with flagging. Piles of logs and tree debris for prescribed burning would be placed outside of SEZ and positioned where water-runoff from pile burning would not return directly into the SEZ or waterway.

Minimization Measure WATER-4: Trail Obliteration and Restoration

The way trail obliteration and restoration would occur with Best Management Practices (BMPs) implemented to prevent soil or sediment from reaching streams and watercourses. BMPs that would be used include but are not limited to:

- Working within the May 1-October 15 grading period for trail obliteration and restoration
- Installing weed-free straw waddle sediment barriers, fiber rolls, or silt fencing as necessary to capture sediment
- Properly decompacting trails and using native mulch gathered on-site, i.e. pine needle mulch, to spread over exposed soil areas to stabilize and protect soil from raindrop impact, improve filtration and decrease run off, to conserve moisture, and to capture and hold seed.
- Avoid stream crossings
- If storms are anticipated during or if construction must occur during winter months, “winterizing” would occur, including the covering (tarping) of any stockpiled soils and the use of temporary erosion control methods to protect disturbed soil.

Avoidance Measure WATER-5: Equipment Fueling

See Avoidance Measure HAZMAT-1.

Minimization Measure GEO-1: Trail Obliteration and Restoration

The way trail obliteration and restoration would occur with Best Management Practices (BMPs) implemented to prevent soil or sediment from reaching streams and watercourses. BMPs that would be used include but are not limited to:

- Working within the May 1-October 15 grading period for trail obliteration and restoration
- Installing weed-free straw waddle sediment barriers, weed-free fiber rolls, or silt fencing as necessary to capture sediment
- Properly decompacting trails and using native mulch gathered on-site, i.e. pine needle mulch, to spread over exposed soil areas to stabilize and protect soil from raindrop impact, improve filtration and decrease run off, to conserve moisture, and to capture and hold seed.
- Minimize stream crossings
- If storms are anticipated during or if construction must occur during winter months, "winterizing" would occur, including the covering (tarping) of any stockpiled soils and the use of temporary erosion control methods to protect disturbed soil.

Minimization Measure GEO-2: Tree Removal

- Tree removal activities using hand crews would start in late summer when the soils are driest.

Avoidance Measure HAZMAT-1: Fuel Spills

All equipment would be inspected by the operators for leaks immediately prior to the start of construction, and regularly inspected thereafter until equipment is removed from project locations.

- Areas would be designated for refueling, lubrication, and maintenance of equipment. Best management practices (BMP) would be employed as appropriate and necessary to contain, collect and dispose of hazardous materials. Hazardous materials would be lawfully disposed of outside of park boundaries.
- Areas designated for refueling, lubrication, and maintenance of equipment would be at least 100 feet from stream corridors, drainages, or seasonal swales.
- Equipment would be cleaned and repaired (other than emergency repairs) outside SEZ. All hazardous compounds would be contained and disposed of outside park boundaries, at a lawfully permitted or authorized destination.

Minimization Measure HAZMAT-2: Wildland Fire

- Chainsaws would be maintained in good working condition.
- In extreme weather and/or when fuels excessively dry, no chainsaw work would be conducted.

- Hand crew leaders and most hand crew members would have Basic Wildland Firefighting certification.
- Basic fire suppression equipment (hand tools, backpack pumps, etc.) is available in crew vehicles. Hand crews would call 911 or radio Northern Communications (DPR dispatch center) for additional firefighting resources as needed.

Minimization Measure AIR-1: Dust

Vehicles would drive 15 miles per hour or slower when driven over dirt roads to minimize the creation of dust.

Minimization Measure AIR-2: Pile Burning

Pile burning would be conducted in project areas, outside of SEZ, where there is no vehicle access or reasonable regulatory agency-approved method to remove the tree remains and debris from the project site.

- Piles would be cured a year before burning to reduce the amount of smoke and chemical emissions.

Minimization Measure AIR-3: Regulations Compliance

DPR would write a smoke management plan (SMP) that includes identifying smoke sensitive areas (i.e., residences in project vicinity, schools, etc.) and submit it to the appropriate air quality regulator, El Dorado Air Quality Management District or the Placer Air Pollution Control District, for approval. The air quality regulator would limit the timing, location, amount and extent of burning to minimize possible adverse effects to sensitive receptors. DPR would also obtain a burn permit from the United States Forest Service, Lake Tahoe Basin Management Unit.

- All burning would comply with air quality regulations.
- Pile burning would be distributed over a period of time and conducted under environmental conditions that would limit impacts on the public.
- DPR would cooperate and coordinate with other public agencies that may be burning and sharing the same air basin to prevent exceeding the pollution standard determined by the air quality agencies.

Minimization Measure AIR-4: Burning Alternatives

- Where accessible, the tree slash and debris would be chipped and hauled away.
- Where accessible, tree and downed woody biomass would be removed to reduce smoke emissions.

Minimization Measure AIR--5

Depending on the soil dryness and wind conditions, the trail removal and rehabilitation areas would be sprayed with water to hinder windborne dust.

Minimization Measure NOISE-1

Manual tree removal and trail obliteration activities would be limited to the daylight hours, Monday – Friday. Over snow tree removal in areas adjacent or near residential housing neighborhoods would begin at 8 a.m. and stop by 6 p.m.

Minimization Measure NOISE-2

Internal combustion engines used for any purpose at the job site would be equipped with a muffler of a type recommended by the manufacturer.

Biological Environment

Avoidance Measure PLANTCOM-1: Unusual Plants and Plant Communities in Perennial Wet Areas

Perennial wet areas with unusual plants and communities would be excluded from tree removal, i.e., fens and perennially wet meadows, because of their sensitivity and susceptibility to damage by work crews and the inability to have a sufficient snow pack to allow heavy equipment to work above it without breaking through.

Minimization Measure PLANTCOM-2: Hand Crews

Hand crews would be used to remove trees instead of heavy equipment during snow free months to decrease impacts to soil and vegetation.

Minimization Measure PLANTCOM-3: Timing of Work

- Hand crew work would be conducted late in the summer and/or fall when soils are driest and typically the native plant communities have set seed and beginning to senesce.
- Over-snow heavy equipment operations would be implemented in winter and early spring in limited and accessible areas when snow pack is of adequate depth and temperature/hardness to prevent damage to the underlying vegetation and moist soils beneath.

Avoidance Measure PLANTCOM-4: Prevention of Invasive Plant Spread

- Motorized equipment used for trail removal and rehabilitation would be washed of plant parts and soil if it had been working in areas known to have invasive plants and/or at park units outside of the Lake Tahoe Basin in order to prevent the spread of non-native invasive plants.
- Weed-free local soil and mulch gathered from the project site vicinity would be primarily used for the removed trail rehabilitation to decrease the chance of introducing invasive non-native plants.

Avoidance Measure WILDLIFE-1: Timing of Work

- Tree removal and trail obliteration/rehabilitation using hand crews would occur in the late summer and fall after the wildlife young are mobile and dispersing.
- Over-snow tree removal would occur in the winter and early spring prior to wildlife mating and breeding activities. See section 3.4.5 Threatened and

Endangered Species regarding measures to avoid and minimize adverse effects of those special status wildlife species.

Avoidance Measure WILDLIFE-2: Marking Prescription

Tree marking prescription would allow for some areas of high density trees as places of refuge and other habitat in riparian corridors and along meadows. The prescription would avoid removing a number of trees that would contribute to increasing the water temperature and removal of shade cover of fish habitat.

Minimization Measure WILDLIFE-3: Aquatic Habitat

- See Avoidance Measure WILDLIFE 2: Marking Prescription above.

- See section 3.3.1 Water Quality for Best Management Practices (BMPs) to be implemented to avoid or minimize impacts to the aquatic habitat.

Avoidance Measure SS PLANT-1: Pre-Project Surveys

Prior to hand crews working in an area, a qualified botanist would conduct special status plant species survey in the appropriate habitat and time of year and use Department of Fish and Game approved survey method. If any special status plant species is found, a California Natural Diversity Database (CNDDB) form would be submitted and depending on the plant's listing status, DFG and/or USFWS would be notified. The special status plants would be demarcated and avoided by work crews.

Avoidance SS PLANT-2: Known Special Status Species

- The hand crews would be briefed about Tahoe yellow cress and the fenced enclosure location at Ed Z'berg-Sugar Pine Point State Park. The fenced area would be avoided by the hand crews.
- Prior to working in the Angora Meadow area at Washoe Meadows State Park, the marsh skullcap in the vicinity of the work area would be flagged by DPR resources staff and avoided by hand crews.

Avoidance Measure SS PLANT-3: New Discovery

Any discovery or sighting of a Federal or State-listed or sensitive species is observed before or during project implementation would be reported to the DPR resources staff. These plants would be demarcated and avoided during the project work.

Avoidance Measure SS WILDIFE-1: Tree Marking

In areas where there are known sensitive raptor nest trees, the DPR forester in consultation with the DPR wildlife biologist would designate and mark trees for removal. Piles of felled trees, slash, and debris within a 0.25 mi radius of sensitive raptor nests would be burned in fall after the young have fledged in consultation with the DPR wildlife biologist.

Avoidance Measure SS WILDIFE-2: Annual Surveys

Annual sensitive raptor surveys conducted by DPR wildlife biologist would determine if existing nesting territories are occupied.

- If the surveys determine the nest and nesting territories are not active, project sites in the vicinity of the nest or within nesting territory would be worked if approved by the DPR wildlife biologist.
- When sensitive raptor breeding and nesting habitat is determined to be occupied, a 0.25 mile buffer of no disturbance would be established and monitored.

Avoidance Measure SS WILDLIFE-3: Pre-Project Mountain yellow-legged frog surveys

Prior to hand crews working in an area near water at Washoe Meadows State Park, a qualified wildlife biologist would survey for mountain yellow-legged frog habitat. If suitable habitat is found, the qualified wildlife biologist would conduct mountain yellow-legged frog survey using an approved survey method in the appropriate habitat and time of year. If mountain yellow-legged frogs are found, DFG and/or USFWS would be notified and consulted.

Avoidance Measure SS WILDIFE-4: Timing Work

The project work with hand crews would work during the late summer and fall when fledging and denning are completed and the young have dispersed. Over-snow tree removal would occur prior to mating and nesting.

_____ _____

Theodore L. Jackson, Jr. Date
Chief Deputy Director
Park Operations Division
California Department of Parks and Recreation

Table of Contents

Chapter 1: Introduction

1.1. Purpose of This Document

This document is a joint environmental assessment/initial study (EA/IS) and satisfies the requirements of the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). This draft EA/IS has been prepared by the California Department of Parks and Recreation (DPR) and the U.S. Department of the Interior, Bureau of Reclamation (USBR), to identify and analyze the anticipated environmental impacts from restoration and enhancement of riparian forests in Burton Creek, D.L. Bliss, Ed Z'berg-Sugar Pine Point, and Washoe Meadows State Parks and Ward Creek Unit in the Lake Tahoe Basin. The Proposed Action would address conifer encroachment in riparian corridors that threaten riparian hardwood forests and removal of unnecessary roads and trails in the riparian corridor.

This draft EA/IS is a public information document prepared to disclose the project's environmental effects and to inform decision makers about these effects in compliance with NEPA and the State CEQA Guidelines (14 Cal. Adm. Code 1400 *et seq*.). The document describes the existing conditions and the potential direct, indirect, and cumulative effects of the Proposed Action and a No Action alternative. This document also identifies measures that have been incorporated into the design of the project to reduce all project impacts to a less-than-significant level as defined by CEQA Guidelines §15065. USBR is serving as the lead agency for NEPA, and DPR is serving as the lead agency for CEQA. The Federal action for USBR is to provide partial funding for the proposed action under the Lake Tahoe Regional Wetlands Development Program.

1.2 Regulatory Guidance and Discretionary Approvals

The NEPA compliance process is guided by its implementing regulations, 23 CFR §771.117. Other cross-cutting Federal regulations are intended to protect a specific environmental resource or element. These include, but are not limited to, Section 106 of the National Historic Preservation Act, Section 7 of the Endangered Species Act, and Executive Orders 11990 and 11998 (Protection of Wetlands and Floodplains, respectively).

In addition to the CEQA compliance process following the CEQA Guidelines (California Code of Regulations §15000 *et seq*), this project has been evaluated according to state and local requirements including, but not limited to, the California Endangered Species Act and regional air and water quality standards.

Applicable regulations are described in corresponding sections of Chapter 3 and Appendix A that discuss elements of the affected environment.

DPR and USBR share approval authority for implementation of this project within the boundaries of Burton Creek, D.L. Bliss, Ed Z'berg-Sugar Pine Point, and Washoe

Meadows State Parks and Ward Creek Unit; however, the following permits, approval, and/or consultations may also be required before work can begin:

- Conditional Waiver for Timber Harvest Activities on Non-Federal Lands with on-site consultations with Lahontan Regional Water Quality Control Board
- Lahontan Regional Water Quality Control Board permit with on-site consultations to conduct trail obliteration and restoration using heavy equipment
- Qualified exemption for forest thinning, prescribed fire, and trail obliteration and restoration from the Tahoe Regional Planning Agency
- Burn Permit from the United States Forest Service, Lake Tahoe Basin Management Unit
- Air Pollution Permit from Placer County Air Pollution District and El Dorado County Air Quality Management District

1.3 Public Participation

This draft EA/IS is being circulated for public and agency review and comment, as required by NEPA and CEQA. If the information and analysis presented in the draft EA/IS or information received during the public review period indicates that there is no substantial evidence that the Proposed Action would have significant effect on the environment, a finding of no significant impact/negative declaration (FONSI/ND) would be adopted by the lead agencies. USBR and DPR would certify the adequacy of the FONSI/ND under NEPA and CEQA before action is taken on the project.

1.4 Organization of This Document

The content and format of this draft EA/IS are based on NEPA and CEQA guidelines and evaluate the project's impacts on the following resources and issues:

Human Environment
- Cultural Resources
- Environmental Justice
- Indian Trust Assets

Physical Environment
- Water Quality and Stormwater Runoff
- Geology/Soils/Seismic/Topography
- Hazards and Hazardous Waste/Materials
- Air Quality
- Noise

Biological Environment
- Plant Communities
- Wetlands and Other Waters
- Wildlife
- Threatened and Endangered Species

Chapter 2: Proposed Action and Alternatives

2.1 Location and Existing Facilities

Lake Tahoe is a large, high elevation (approximately 6,223 ft.) lake in the Sierra Nevada Mountains. The lake sits in a basin encompassed by the Crystal range to the west and the Carson range to the east. The border between California and Nevada divides the lake. Lake Tahoe Basin is approximately 20 miles southwest of Reno, Nevada and approximately 80 miles northeast of Sacramento, California. See Sierra District, Lake Tahoe Sector Map in Appendix B.

Within the Lake Tahoe Basin, Burton Creek State Park, D.L. Bliss State Park, Ed Z'berg-Sugar Pine Point State Park, Ward Creek Unit, and Washoe Meadows State Park are located on the California side. Burton Creek State Park and Ward Creek Unit are located in Placer County. D.L. Bliss and Ed Z'berg-Sugar Pine Point State Parks are located in El Dorado County. Most of the park units are adjacent to Lake Tahoe Basin Management Unit of the U.S. Forest Service, private property, and/or California Tahoe Conservancy property.

Burton Creek State Park is approximately 2,000 acres and just northeast of Tahoe City on the north shore of Lake Tahoe. This unit has no developed facilities but does have a network of dirt logging roads and trails. The significant resources are Antone Meadow and Burton Creek Natural Preserves which are located along Burton Creek.

D.L. Bliss State Park is 957 acres and 280 acres are leased from the U.S. Forest Service. DPR has a U.S. Forest Service special use permit to manage and operate recreation facilities on the leased lands. This park unit has campgrounds, day use area along the shoreline, and trails. There are beautiful views of Lake Tahoe from the Lighthouse and Rubicon Trails, Calawee Cove, and Lester Beach. D.L. Bliss State Park is contiguous with Emerald Bay State Park to the south and approximately seven miles north of the city of South Lake Tahoe.

Ed Z'berg-Sugar Pine Point State Park is adjacent to the communities of Tahoma and Meeks Bay in El Dorado County. This unit is approximately 2,011 acres. The unit includes the Edwin L. Z'berg Natural Preserve, campground, day-use area, system of roads and trails, park buildings (District and administrative offices, maintenance shop) and employee residences. General Creek runs the length of the park and is a main feature of the park. The day use area includes the Ehrman Mansion historic complex. There is approximately 7,700 feet of shoreline along Lake Tahoe. (DPR1992)

Ward Creek Unit is an unclassified property of approximately 173 acres. Unclassified property is Department-owned or managed properties which are significant in terms of their resources values or their size. They are not proximate to or associated with an existing major classified unit. The Department anticipates that at some future date the

State Park and Recreation Commission would officially classify most of them as new, individual units of the State Park System (DPR 2005). Ward creek is the most prominent feature at the unit.

Washoe Meadows State Park encompasses approximately 628 acres with frontage along the Truckee River. The unit is surrounded by residential urban development. Lake Valley State Recreation Area is contiguous to Washoe Meadows State Park. The Upper Truckee River forms a common boundary for these two State Park units. There are diverse types of vegetation, including conifer forest, wet and dry meadows, fen, and riparian woodland that support a variety of wildlife within the State Park. Both the Truckee River and extensive meadows are significant natural and aesthetic features of the unit.

2.2 Purpose and Need

Background

The riparian hardwood forests in the Lake Tahoe Basin provide critical functions to the overall environmental health in the Basin. They are dominated by willow (*Salix* spp.), alder (*Alnus incana* ssp. *tenufolia*), and quaking aspen (*Populus tremuloides*) trees. These forests increase biodiversity by providing habitat elements not found in the general mixed conifer forest prevalent in the basin. Approximately 30 percent of native bird species and 53 percent of native mammal species in the Basin are associated to some degree with riparian habitats (Manley and Schlesinger 2001). In addition, the riparian forests help maintain water quality by providing filtering of overland flows during storm events and stabilization of slopes and soil near stream courses. They also provide shade on the stream keeping water temperatures cool and thus benefiting many aquatic species.

The riparian hardwood forest, riparian corridors, meadows, marshes, and areas with seasonally high water tables are designated as Stream Environment Zones (SEZs). These vegetated SEZs help to protect water quality by filtering sediments and other pollutants that might be introduced to waterways and eventually reach Lake Tahoe. In the Tahoe Basin, many SEZs have been disturbed by humans or lack natural processes, such as low intensity fires, that historically maintained the SEZ hydrology and vegetation in a natural state. Where these disturbances or fires have been suppressed to protect values-at-risk (human lives and property), the result has been an increased fire hazard due excessive accumulation of dead, dying, or diseased vegetation and excessive conifer encroachment and growth. Other sources of sediments in the Basin are dirt roads and skid trails from former timber operations, and way trails, or trails created by park visitors from constant use that were not properly built or maintained. Such roads and trails in SEZs and adjacent areas if not properly built can intercept and channel water, causing erosion and accelerate the transport of sediment into waterways and Lake Tahoe.

Purpose
The purpose of this project is to restore and enhance riparian hardwood forest in DPR units in the Lake Tahoe Basin by removing the encroaching conifer forest to retain the riparian habitat character and treating the sediment sources by rehabilitating bare areas and unnecessary travel routes located in the riparian corridors. This would reduce erosion, improve in-stream and riparian habitat, improve wildlife habitat, improve water quality, and reduce hazardous fuels.

These riparian hardwood forests have been disappearing in the Basin due to previous land conversion and development and degradation due to conifer encroachment. In addition, these forests have a legacy of old logging skid roads, other roads, and trails no longer needed for park and forest management. These features serve as sources of sediment entering the stream courses and contributing to the reduction of Lake Tahoe's famed clarity.

2.3 Proposed Action

The California Department of Parks and Recreation (DPR) proposes to restore and enhance approximately 200 acres of riparian forests by removing encroaching conifers and remove approximately 0.5 mile of unnecessary roads, skid trails, and way trails that are sediment sources in the riparian corridors within 844 identified acres at Burton Creek, D.L. Bliss, Ed Z'berg-Sugar Pine Point, and Washoe Meadows State Parks and Ward Creek Unit. If future funding becomes available, DPR would treat additional acres within the 844 acres identified.

The proposed project is located in Burton Creek, D.L. Bliss, Ed Z'berg-Sugar Pine Point, and Washoe Meadows State Parks and Ward Creek Unit at the following locations:

Park Unit	Section Portion	Township	Range	Section(s)	Meridian
Burton Creek State Park Placer County	S1/2	16N	16E	25	Mount Diablo
	SE1/4	16N	16E	36	Mount Diablo
	SW1/4	16N	17E	30	Mount Diablo
		16N	17E	31	Mount Diablo
D.L. Bliss State Park El Dorado County	NW1/4	13N	17E	9	Mount Diablo
	E1/2	13N	17E	16	Mount Diablo
	SW1/4	13N	17E	15	Mount Diablo
Ed Z'berg-Sugar Pine Point State Park El Dorado County		14N	17E	16	Mount Diablo
		14N	17E	19, 20, 24, 25	Mount Diablo
	NW1/4	14N	17E	30	Mount Diablo
	E1/2	14N	16E	26	Mount Diablo
Ward Creek Unit Placer County		15N	16E	24	Mount Diablo
Washoe Meadows State Park	SE1/4	12N	18E	18	Mount Diablo

	E1/2	12N	18E	19	Mount Diablo
	W1/2	12N	18E	20	Mount Diablo
	NW1/4	12N	18E	29	Mount Diablo
	NE1/4	12N	18E	30	Mount Diablo

Work throughout the park units would include:

- Removal of encroaching conifers up to 200 acres in the identified riparian corridors using manual removal with hand crews and/or heavy equipment over snow.
- DPR registered professional forester would determine thinning prescription on a site by site basis based on: riparian forest health, ability to remove felled trees and associated tree debris, and in consultation with regulatory agencies and DPR cultural and natural resources staff.
- Removal of encroaching conifers in the riparian corridor manually by hand crews.
- Removal of encroaching conifers in the riparian corridor may be completed using heavy equipment over snow at three parks:
  - Sugar Pine Point State Park up to 41 acres
  - D.L. Bliss State Park up to 4.5 acres
  - Washoe Meadows State Park up to 28 acres
- Removal of felled trees and debris out of riparian corridor for pile burning, chipping, or disposal depending on vehicle accessibility. DPR would write a smoke management plan (SMP) that includes identifying smoke sensitive areas (i.e., residences in project vicinity, schools, etc.) and submit it to the appropriate air quality regulator, El Dorado Air Quality Management District or the Placer Air Pollution Control District, for approval. The air quality regulator would limit the timing, location, amount and extent of burning to minimize possible adverse effects to sensitive receptors.
- Pile burning would be done in designated areas agreed upon by regulatory agencies and DPR natural and cultural resources staff.
- Obliteration and rehabilitation of approximately 0.5 miles of skid road, skid trail, and way trails in the riparian corridor. See Appendix C for trail removal and obliteration specifications. This may include hand crews and/or small and heavy equipment.

See project maps for each park unit in Appendix B.

2.4 Project Objectives

The mission of the California Department of Parks and Recreation is to provide for the health, inspiration, and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation. This project directly supports the Department's mission to help preserve the state's extraordinary biological diversity and protecting its most valued natural resources. This project is also consistent with the Burton Creek General Plan (2005). For the park units without general plans, this project is consistent with DPR's cultural resource management directives and Department's Operations Manual 0300, Natural Resources.

2.5 Project Implementation

- CEQA/NEPA and permitting competed winter 2006.
- Over-snow contract advertise in winter 2006.
- Winter of 2006 and/or winter 2007 commence over-snow operations at Sugar Pine Point and D.L. Bliss State Parks, snow conditions permitting.
- Manual removal encroaching conifers would occur in late summer/fall 2007 and 2008. Pile burning of tree waste and debris would cure for a minimum of one season before burned.
- Trail obliteration and rehabilitation would occur in summer/fall of 2007 or 2008.

2.6 No-Action Alternative

Evaluation of the environmental consequences of a "no action" alternative is required pursuant to NEPA and a "no project" alternative for CEQA. This document refers to these collectively as the "No Action" Alternative. This alternative represents the future conditions without implementation of the Proposed Action. Under the No Action Alternative, the Riparian Hardwoods Restoration and Enhancement Project would not be completed and the riparian corridors and hardwood forests would continue to be invaded by conifers. The conifers would continue to invade the riparian corridors and crowd out the riparian hardwoods. Quaking aspen stands would disappear as the conifer canopy over tops them and shades out these high-light requiring trees. The loss of the riparian hardwoods would result in a decrease in biological diversity of plant species, plant communities, and wildlife. These invading conifers would contribute to the excessive overstocking of trees and to potential catastrophic wildfires. Unnecessary skid roads, skid trails, and way trails would continue to be a source of sediment for waterways and Lake Tahoe.

Because the No Action Alternative represents future conditions, it is possible that other actions may take place and projects may be constructed and implemented in the foreseeable future that could affect environmental resources absent the Proposed Action. NEPA requires the disclosure of effects that foreseeable actions may have on environmental resources. These effects are discussed in Chapter 3, 'Affected Environment' of this EA/IS in the analysis of those specific resource areas.

2.8 Permits and Approvals

DPR and USBR share approval authority for implementation of this project within the boundaries of Burton Creek, D.L. Bliss, Ed Z'berg-Sugar Pine Point, and Washoe Meadows State Parks and Ward Creek Unit; however, the following permits, approval, and/or consultations may also be required before work can begin:

- A Conditional Waiver for Timber Harvest Activities on Non-Federal Lands with on-site consultations with Lahontan Regional Water Quality Control Board
- A Lahontan Regional Water Quality Control Board permit with on-site consultations

to conduct trail obliteration and restoration using heavy equipment

- Qualified exemptions for forest thinning, prescribed fire, and trail obliteration and restoration from the Tahoe Regional Planning Agency
- Burn Permit from the United States Forest Service, Lake Tahoe Basin Management Unit
- Air Pollution Permit from Placer County Air Pollution District and El Dorado County Air Quality Management District

Chapter 3: Affected Environment and Environmental Consequences

3.1 Introduction

This chapter presents information on the affected environment and environmental consequences. The environmental consequences are analyzed for the following resources in this chapter:

- Cultural Resources
- Environmental Justice
- Indian Trust Assets
- Water Quality
- Hazardous Waste and Hazardous Materials
- Air Quality
- Noise
- Natural Communities
- Wetlands and Other Waters
- Plant Species
- Animal Species
- Threatened and Endangered Species

As part of the scoping and environmental analysis conducted for the project, the following environmental resources and issues were considered but no potential for adverse impacts to these was identified. Consequently, there is no further discussion regarding the following in this Environmental Assessment:

- Existing and Future Land Use (parks and recreation designation would not change)
- Consistency with State, Regional, and Local Plans (see Appendix A for Consistency discussion)
- Parks and Recreation (see Appendix A for Consistency discussion)
- Growth Inducement (the project has no housing component and no new, permanent jobs or economic activity would result from its implementation)

- Farmlands and Timberlands (see Appendix A for discussion of agricultural setting)
- Accessibility (project has no construction of facilities that require design in order to comply with Americans with Disabilities Act)
- Traffic and Transportation (see Appendix A for Transportation discussion)
- Visual and Aesthetic Resources (see Appendix A for Aesthetics discussion)

Additionally, a CEQA Environmental Checklist developed by the Governor's Office of Planning and Research is included as Appendix A. The CEQA Environmental Checklist provides an analysis of environmental impacts on additional resources. For the purposes of CEQA, the effects of implementing the Proposed Action are compared to Existing Conditions. For the purposes of NEPA, the effects of the Proposed Action are compared to No Action. For most issue areas, Existing Conditions and No Action are identical, so only one comparison is made.

3.2 Human Environment

NEPA Regulations require federal agencies to study the proposed action's effects on the quality of the human environment. The Council on Environmental Quality (CEQ) regulations at 40 CFR 1508.14 state that the term Human Environment, as used in the Act, shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment.

3.2.1 Cultural Resources

Affected Environment

In consultation with U.S. Bureau of Reclamation and Native American representatives with interest in the project vicinity, a DPR State Archaeologist conducted archival and field research and compiled an inventory of cultural resources in the Area of Potential Effects (APE), *the geographic area(s) within which an undertaking may directly or indirectly cause alteration in the character or use of historic properties, if any such properties exist* (per 36 CFR 800.16[d]). The DPR archaeologists conducted a field archaeological survey on the project to relocate previously identified cultural resources and record newly discovered resources. The physical examination of the APE was supplemented by research of literature on file in the Sierra District cultural resources office at Ed Z'berg-Sugar Pine Point State Park in Tahoma; review of U.S. Forest Service-Lake Tahoe Basin Management Unit in South Lake Tahoe; literature on previously conducted archaeological research; documents on file with DPR Sierra District; records on file with North Central Information Center of the California Historical Resources File Center; local histories; secondary sources: documents and photographs on file with the Lake Tahoe Historical Society; and the Special Collections Department of the Getchell Library at the University of Nevada at Reno. Information was also gathered through interviews with park personnel, Washoe consultants, and regional archaeologists.

Land use and acquisition history for Burton Creek State Park, Ward Creek Unit, and D.L. Bliss State Park included review of the El Dorado and Placer County historical maps as well as Government Land Office (GLO) Survey Plats. The maps depict historical place names, structures, roads, and other features. The most recent inventory of cultural resources located in Burton Creek SP was completed in 1991. A total of 1022 acres of the Park were intensively surveyed for cultural resources, equal to about 54% of current park managed lands in the unit. Nine historic archaeological sites, one historic water ditch, and one standing historic structure were recorded. Fragmentary remains of a single log cabin were found at five sites with all sites estimated to date from the 1920s and 1930s based on associated historic refuse.

The primary historic resources in D.L. Bliss State Park are the buildings and features constructed between 1934 and 1940 by the Civilian Conservation Corps (CCC). Archaeological sites reported include one large historic site (representing the CCC camp), two tin can dumps, rock walls, campground furniture (e.g. picnic tables, Diablo stoves), roads, and trails.

Previous archaeological investigations at the other project park units. Pacific Legacy, Inc. was contracted to conduct a complete cultural resources inventory for the Ed Z'berg-Sugar Pine Point and Washoe Meadows State Parks in 2002 and 2003 respectively (Shapiro et al. 2003, 2004). The archaeological inventory for Ed Z'berg-Sugar Pine Point State Park—encompassing approximately 2,400 acres—identified 36 archaeological sites (17 prehistoric, 13 historic, 6 multicomponent), 15 linear features (e.g. road beds, fence lines, ditches), and 56 isolated fines (e.g. biface fragment, secondary can deposits).

The Ward Creek Unit archaeological survey covered total of 158 acres, or 91% of the park's 173 acres. One small prehistoric site consisting of a bedrock mortar outcrop, one collapsed log cabin site with possible privy feature and associated historic refuse and historic concrete dam on Ward Creek were identified. As of September 8, 2006, the Ward Creek dam was removed and replaced with step pools (C. Walck, personal communications).

In addition, Native American consultation was also included in the project research. Correspondence regarding this project was conducted with Rob Wood (California Native American Heritage Commission), William Dancing Feather (Washoe Cultural Resources Coordinator), and Lynda Shoshone (Washoe Tribal Council Representative). Coordination with the Native American community began by contacting the Native American Heritage Commission (NAHC) and requesting a search of sacred lands files.

The archaeological survey completed within the project area identified a total of 67 cultural resources in the APE: 53 archaeological sites and 14 linear features. See Appendix D for cultural resources found within the project sites at each park unit.

Environmental Consequences
Heavy equipment and vehicles would potentially impact cultural resources if they were driven off of existing roads during the late summer/fall work season or during trail obliteration and restoration work. Heavy equipment and vehicles would possibly impact cultural resources if there is not adequate snow pack depth, snow hardness, and cold temperatures for over-snow operations.

Piling of tree debris and burning the piles on top of known cultural resources would damage those cultural resources if on the surface or near the surface of the soil.

The Sacred Lands Inventory review by the NAHC did not identify any recorded sacred sites, native plant gathering locations, traditional cultural properties or other special resources that may be affected by the proposed project. A list of Native American individuals and groups that might have an interest in the proposed project also was requested from NAHC.

Avoidance, Minimization, and/or Mitigation Measures
There is a likelihood of uncovering artifacts/features as a result of conifer removal and trail obliteration and restoration activities given the archaeological sensitivity of project areas. The following measures have been developed to ensure that project-related construction activities would have a less than significant impact on cultural resources.

Avoidance Measure CULT-1: Protected Areas
All historic properties are assumed eligible for the National Register and would be protected throughout the duration of the project.

Cultural resources within the units scheduled for treatment would be flagged no more than 30 days prior to commencement of the vegetation management activities in the field. Designated flagging color would demarcate areas of avoidance. If project delays occur which exceed the 30-day limit to commencement of field activities, a qualified DPR archaeologist and/or DPR Registered Professional Forester would check flagging to assure that it is still visible prior to field activities.

Avoidance Measure CULT-2: Pre-Start Meetings
Prior to beginning project work, the DPR archaeologist, project manager, and hand crew leader(s) and/or over-snow contractor would meet on the project site to discuss project implementation and recommendations/conditions.

Avoidance Measure CULT-3:
Debris piles would be located outside of delineated archaeological site or linear feature boundaries. Pile burning within these archaeological sensitive areas is prohibited unless otherwise approved by the DPR archaeologist.

Avoidance Measure CULT-4:

No vehicles or heavy equipment within archaeological exclusion zones.

Avoidance Measure CULT-5:

Conifer tree removal would be limited to hand clearing in areas within and adjacent to recorded archaeological sites and cultural resource features. Manual removal would take place first in areas of identified resources and work outward to fully identify and protect the newly documented and/or extended resources.

Avoidance Measure CULT-6: Archaeological Discovery Provisions

- In the event of an unanticipated discovery of previously-undocumented cultural resources during the project activities, work would be suspended in the area until a DPR archaeologist has assessed the find and has developed and implemented appropriate avoidance, preservation, or recovery measures prior to any work resuming at that specific location.
- In the event that human remains are discovered during project activity, work will cease immediately in the area of the find and the project manager/site supervisor will notify the appropriate DPR personnel. Any human remains and/or funerary objects will be left in place. Existing law requires that project managers contact the County Coroner. If the remains are determined to be of the Native American origin, both the Native American Heritage Commission and any identified descendants shall be notified. (Health and Safety Code Section 7050.5, Public Resources Code Section 5097.97 and 5097.98). DPR staff will work closely with USBR to ensure that its response to such a discovery is also compliant with federal requirements including the Native American Graves Protection and Repatriation Act.

Cumulative Effects

In order to manage natural resources, conduct day to day park operations, maintain and improve park facilities in state parks, projects such as these have occurred in the past, currently, and would continue into the future. DPR values cultural resources as indicated in the department mission statement providing for the protection of cultural resources. The DPR Sierra District has a cultural staff that includes a full-time archaeologist and seasonal staff that evaluates park projects and monitors park operations and project activities to avoid, minimize, or mitigate impacts to cultural resources. This project would avoid effects and not result in cumulative adverse effects on cultural resources at the park units.

3.2.2 Environmental Justice

Executive Order 12898 requires each Federal agency to identify and address disproportionately high and adverse human health or environmental effects, including social and economic effects of its program, policies, and activities on minority populations and low-income populations. The proposed action would not result in any adverse human health or environmental effects to minority or low-income populations.

3.2.3 Indian Trust Assets

Indian Trust Assets (trust assets) are legal interests in property or rights held in trust by the United States for federally recognized Indian tribes or individual Native Americans. The trust relationship usually stems from a treaty, executive order, or act of Congress. USBR shares the Indian Trust responsibility with all other agencies of the Executive Branch. The Secretary of the Interior is the trustee for the United States on behalf of federally recognized Indian tribes. "Assets" are anything owned that holds monetary value. "Legal interests" means there is a property interest for which there is a legal remedy, such as a compensation or injunction, if there is improper interference. Trust assets can be real property, including lands, Indian reservations, rancherias, and public domain allotments. Trust assets also include intangible property rights, such as a lease or right to use something; e.g. minerals, water, or hunting and fishing rights. Such assets cannot be sold, leased, or otherwise alienated without Federal approval. In some cases, Indian Trust Assets may be located off trust land.

Affected Environment

According to the Library of Congress (2006), in August 2003, 24 acres north of Skunk Harbor on the Nevada side of Lake Tahoe was conveyed from the Lake Tahoe Basin Management Unit, U.S. Department of Agriculture to the U.S. Department of Interior to be held in trust for the Washoe Indian tribe of Nevada and California (Public Law No: 108-067). Under this law, the Washoe tribe is limited to using the land for traditional and customary uses and stewardship conservation and does not permit permanent or recreational development or commercial use. This Indian Trust land is located across the lake about 11 miles northwest of Burton Creek State Park, the nearest project park unit.

The Washoe Tribe has interests on the west shore of Lake Tahoe (Maher personal communications). The Tribe operates the Meeks Bay Resort under a U.S. Forest Service, Lake Tahoe Basin Management Unit special use permit as a concessionaire. The Tribe has a memorandum of understanding with the Lake Tahoe Basin Management Unit to manage the vegetation resources along Meeks Creek for traditional uses (i.e. materials for basketry, etc.). Meeks Bay is less than 0.25 mile south of Ed Z'berg-Sugar Pine Point State Park.

No Indian trust lands or assets are present within the five park units of the project. This project would not affect the concessions at Meeks Bay Resort or impact the vegetation resources at Meeks Creek; therefore no impacts to Indian Trust Assets would occur as a result of this project.

Environmental Consequences

None.

Avoidance, Minimization, and/or Mitigation Measures
None.

Cumulative Effects
None.

3.3 Physical Environment

3.3.1 Water Quality

The Lake Tahoe Basin has its own natural filtration system of meadows, marshes, floodplains, and wetlands. These habitats filter the water of pollutants and contaminants before reaching waterways and Lake Tahoe. However due to significant loss and disturbance of these habitats and the natural processes that maintained them, these habitats are vigorously protected by regulatory agencies, including TRPA and Lahontan RWQCB. TRPA and Lahontan RWQCB have designated these sensitive habitats as stream environment zones (SEZs). SEZs are areas that have high water tables or contain surface or standing water for all or part of the year.

Affected Environment
Lake Tahoe is recognized as an Outstanding National Resource Water by the U.S. Environmental Protection Agency's Water Quality Standards Program and the Clean Water Act. Under this designation, Lake Tahoe is afforded the highest protection from degradation. (TRPA 2002b).

This project is located in the Lake Tahoe Basin watershed in the following riparian corridors: Burton Creek State Park - Burton Creek and an unnamed seasonal creek; D.L. Bliss State Park - Rubicon Creek and two unnamed tributaries; Ed Z'berg-Sugar Pine Point State Park - General Creek; Ward Creek Unit - Ward Creek; and Washoe Meadows State Park - Angora Creek and a tributary and the Truckee River. Only General Creek, Angora Creek, and the Truckee River are perennial waterways.

These waterways have been altered for or by human use. Burton Creek and unnamed seasonal creek both have dams that impound water. The unnamed seasonal creek has a pipe coming out of the ground with water, snowmelt, and precipitation run off all supplying water for the dam further downstream. Historically, General Creek has had water diverted by ditch and flume to supply water to the Ehrman Mansion complex. Until recently, Ward Creek was dammed. Angora Creek had jumped its banks and began flowing down the South Tahoe Public Utility District sewer line in the meadow. Since that time, a DPR stream restoration project recaptured the creek into its historic stream channel and restored the meadow. D.L. Bliss and Ed Z'berg-Sugar Pine Point creeks cross Highway 89 and the stream channel has been replaced by culverts under the highway.

These riparian corridors in the park units vary in the amount of vegetation and hardwood forests, steepness of the embankment slopes, and presence of water. Natural disturbance processes like fire and flooding and frequency have been substantially altered or suppressed and the riparian corridors and meadows are being invaded by excessive encroachment of conifer trees.

Environmental Consequences

Tree removal and trail obliteration and restoration in these riparian corridors have the potential to affect drainage patterns or sediment transport rates and affect surface waters. Instead of using heavy equipment to cut and remove trees, hand crews would hand fall and manually remove conifer trees from the riparian areas to minimize impact to sensitive soils and vegetation. Walking and manually hauling felled trees and slash may impact sensitive soils and vegetation. Heavy equipment would be used over-snow to remove trees to also help minimize disturbance to sensitive soils and non-target vegetation. Tree debris would be piled and burned outside the SEZ in areas not adjacent to roads where the tree debris can be chipped and hauled away.

During trail removal in riparian corridors, Best Management Practices (BMPs) would be implemented to prevent sediment from reaching the waterways. The trail removal/site obliteration would require decompacting the trail tread and recontouring it to match the existing contours and natural drainage pattern using heavy equipment and/or hand crews depending on the size and extent of the existing road, skid trail, or way trail.

Avoidance, Minimization, and/or Mitigation Measures

All measures in this EA are DPR's responsibility. Implementation of the following mitigation measures would reduce each impact to a *less than significant level*.

Avoidance Measure WATER-1

Vehicles to stay on existing roads in SEZ areas during hand crew operation.

Minimization Measure WATER-2: Hand Crew Tree Felling and Removal

Use hand crews and/or heavy equipment over-snow to remove encroaching conifers in the riparian areas.

- Hand crews would begin work in late Fall when SEZ soils are driest.
- Hand crews would not cross streams when manually hauling out trees and associated tree debris.
- Hand crews would fell trees away from the creek.
- Hand crews would avoid creating trails or areas of repetitive use in SEZ.

Minimization Measure WATER-3: Over-Snow Tree Felling and Removal

- Over-snow heavy equipment would not be allowed closer than 25 feet to a creek or stream.
- Over-snow heavy equipment would not be allowed to cross a creek or stream, if there could be potential impacts to the stream bank. Conditions for crossing a

creek or stream would be if the watercourse is completely covered by snow, has no water flow, and the snow pack of sufficient depth and hardness to prevent breaking through. The creek or stream center would be flagged at the over-snow treatment units.

- Over-snow heavy equipment would only be allowed to work when sufficient snow pack and environmental conditions would protect underlying wet soils and vegetation.
- Over-snow landings would be place when possible in previous landing sites or disturbed areas. Best Management Practices would be in place if the landing is not cleared of logs prior to snow melt. Over-snow landings would be decompacted and mulched with local, native materials and/or woodchip.
- Non-target riparian vegetation would be protected from damage from over-snow removal of conifers.
- SEZs would be marked with flagging. Piles of logs and tree debris for prescribed burning would be placed outside of SEZ and positioned where water-runoff from pile burning would not return directly into the SEZ or waterway.

Minimization Measure WATER-4: Trail Obliteration and Restoration

The way trail obliteration and restoration would occur with Best Management Practices (BMPs) implemented to prevent soil or sediment from reaching streams and watercourses. Applicable BMPs include but are not limited to:

- Working within the May 1-October 15 grading period for trail obliteration and restoration
- Installing weed-free straw waddle sediment barriers, fiber rolls, or silt fencing as necessary to capture sediment
- Properly decompacting trails and using native mulch gathered on-site, i.e. pine needle mulch, to spread over exposed soil areas to stabilize and protect soil from raindrop impact, improve filtration and decrease run off, to conserve moisture, and to capture and hold seed.
- Avoid stream crossings
- If storms are anticipated during or if construction must occur during winter months, “winterizing” would occur, including the covering (tarping) of any stockpiled soils and the use of temporary erosion control methods to protect disturbed soil.

Avoidance Measure WATER-5: Equipment Fueling

See Avoidance Measure HAZMAT-1.

Cumulative Effects

In the past, riparian areas have had natural disturbance processes like fire or large water events that help to shape and maintain stream and river characteristics and vegetation. During the Comstock era (mid- to late 1880’s) when clear cutting of trees in the Lake Tahoe Basin was practiced, large sediment loads entered into waterways leading to Lake Tahoe. Since that time and after decades of fire suppression and

manipulation of streams and creeks, the riparian corridors at the state park units are being invaded by conifers.

Other projects in the vicinity of this project are also addressing the excessive forest fuels, wildfire danger, and previous waterway manipulations. The Fire Safe Council has a tree thinning and pile burning project adjacent to the northern boundary of D.L. Bliss State Park. There are various California Tahoe Conservancy (CTC) forestry projects; and DPR has Forest Health and Fuels Reduction projects at the park units around the lake. The largest project in the vicinity is the U.S. Forest Service (USFS) Quail Vegetation and Fuels Treatment project. USFS is using mechanical and hand crew removal of trees and prescribed burning for Wildland/Urban Interface along the west shore from Tahoe City to Emerald Bay. This USFS project would continue until 2011.

DPR is in the planning stages of the Upper Truckee River Restoration and golf course reconfiguration at Washoe Meadows State Park and Lake Valley State Recreation Area. This project would restore the channel sinuosity and flood plain of the Truckee River through the golf course. There are other possible future river restoration projects along different reaches of the Truckee River such as Sunset Stables (CTC), Airport (City of South Lake Tahoe); and Marsh (CTC).

At Ed Z'berg-Sugar Pine Point State Park, DPR has plans for storm-related damaged roads and trails rehabilitation and reconstruction. In winter 2005 and spring 2006, rain and snow events damaged roads and trails throughout the park unit. The Federal Emergency Management Agency (FEMA) funds were obtained to restore the affected roads and trails.

This project would not result in facilities development or create permanent impervious ground cover. Coupled with the avoidance, minimization, and mitigation measures and Best Management Practices, the project would have minimal cumulative effects on the riparian areas and water quality in light of existing and future projects in the area. The proposed project promotes beneficial long-term effects that would include a decreased risk of catastrophic wildfire and restore and enhance riparian hardwoods. These benefits help to offset the temporary effects.

3.3.3 Geology/Soils/Seismic/Topography

In the TRPA Goals and Policies, Soils (1986), Goal #1 is stated as "Minimize soil erosion and the loss of soil productivity." This goal is to maintain soil productivity and existing vegetation cover and prevent excessive sediment and nutrient transport to streams and lakes.

Affected Environment

See CEQA Environmental Checklist, V. Geology/Soils, in Appendix A regarding information on environmental setting and topography.

The topography of the project areas within the five state park units does not have steep gradients. Typically, the topography within the riparian corridors of the project areas is composed of flat to gentle sloping areas.

Soils

Most of the soils in the Lake Tahoe Basin are of granitic or volcanic parent material. The soils are geologically young and poorly developed. Most soils are shallow, coarse textured, and have low cohesion, and contain small amounts of organic material. These attributes account for a high erosion potential on steeper slopes in the Tahoe Basin. There are a variety of soil types within the project area and among the five state park units. See Appendix E for soil types and soil type descriptions.

Seismicity

The Preliminary Resource Element for Sugar Pine Point State Park (DPR 1992) characterizes the seismicity of the Lake Tahoe Basin. Based upon physiographic evidence, the main fault on the west side of the Lake Tahoe Basin probably lies less than a mile east of the shore at Ed Z'berg-Sugar Pine Point State Park, about 0.5 mile east of the shore at Rubicon Point, and continues south immediately offshore of Eagle Point, heading inland at Baldwin Beach.

Since the 1900's, a number of earthquakes with an intensity of less than 5.0 Richter magnitude have been recorded in the Basin, although historical epicenters are more common to the north in the Truckee Basin and to the south-southeast of the Tahoe Basin along the Sierra Nevada frontal fault system. Both of these areas have experienced moderate to high magnitude earthquake activity measuring between 5.0 and 7.5 on the Richter scale. The project areas are not located within Alquist-Priolo Earthquake Fault Zone (CDC 2006). The Alquist-Priolo Earthquake Fault Zone is a regulatory zone around surface traces of active faults established by the State Geologist and mapped.

Liquefaction and Landslide Hazards

Secondary seismic hazards, such as liquefaction and landslides, may occur during an earthquake. Liquefaction could occur in loose, granular materials (alluvium) below the water table, such as along stream channels and in unconsolidated, disturbed materials. It takes place when a granular material is transformed from a solid state to a liquid state during earthquake events. There is potential for liquefaction as a result of seismic events is high in areas of unconsolidated and saturated fine-grained alluvium to occur in areas such as at the mouth of creeks.

Landslides or mass wasting is a downward movement of soils and rock under the pull of gravity. Mass wasting requires soils and rock, slope, and a triggering mechanism. Triggering mechanisms include earthquake shaking, heavy rainfall, and erosion. Landslides, rolling boulders, and snow avalanches are potential geological hazards in areas with steep slopes. However, the absence of steep slopes within or immediately

adjacent to the project site greatly minimizes these risks of earthquake triggered landslides, avalanche, and rolling boulders.

Paleontology

There are no known paleontological resources at the park units.

Environmental Consequences

This project would not significantly affect topographical, geological, or paleontological resources. The project is located in Landslides and rock and snow avalanches are not expected to be hazards because of the more gradual topography of the respective riparian corridors. Liquefaction could occur at the mouth of General Creek located in Ed Z'berg-Sugar Pine Point State Park, the only location of the project comprised primarily of loose alluvium. During way trail removal and rehabilitation, trail tread would be scarified and decompacted and the soil recontoured to match the existing slope and natural drainage. See Appendix C for Trail Obliteration and Restoration Specifications. This part of the project could result in exposed and disturbed soils that could erode and enter waterways if not properly mitigated with Best Management Practices, such as native mulch spread over exposed soil to prevent wind and water erosion.

Avoidance, Minimization, and/or Mitigation Measures

Avoidance, minimization, and/or mitigation of adverse effects from the proposed project are the responsibility of DPR. Implementation of the following measures would reduce each impact to a *less than significant level*.

Minimization Measure GEO-1: Trail Obliteration and Restoration

The way trail obliteration and restoration would occur with Best Management Practices (BMPs) implemented to prevent soil or sediment from reaching streams and watercourses. Applicable BMPs include but are not limited to:

- Working within the May 1-October 15 grading period for trail obliteration and restoration
- Installing weed-free straw waddle sediment barriers, weed-free fiber rolls, or silt fencing as necessary to capture sediment
- Properly decompacting trails and using native mulch gathered on-site, i.e. pine needle mulch, to spread over exposed soil areas to stabilize and protect soil from raindrop impact, improve filtration and decrease run off, to conserve moisture, and to capture and hold seed.
- Avoid stream crossings
- If storms are anticipated during or if construction must occur during winter months, "winterizing" would occur, including the covering (tarping) of any stockpiled soils and the use of temporary erosion control methods to protect disturbed soil.

Minimization Measure GEO-2: Tree Removal

- Tree removal activities using hand crews would start in late summer when the soils are driest.

Cumulative Effects

Past land uses both within and adjacent to the five park units have contributed to erosion and increased runoff of sediments into Lake Tahoe. Historically in the mid to late 1800's the forests of the Lake Tahoe Basin were clear cut for lumber used during the Comstock era in Nevada. Skid trails and roads still exist in the riparian areas of the park units. Today, DPR visitors have created way trails in the riparian corridors to access streams and creeks. Other projects, as mentioned in Cumulative Effects of Water, cumulatively would contribute to sediment reaching waterways and eventually into Lake Tahoe. This project does not result in facilities development or create permanent impervious ground cover. Coupled with the mitigations and Best Management Practices, the project would have minimal cumulative effects on the riparian areas and water quality in light of existing and future projects in the area. This project promotes beneficial long-term effects that would include a decreased risk of catastrophic wildfire and restore and enhance riparian hardwoods. These benefits help to offset the temporary effects.

3.3.4 Hazardous Waste/Materials and Hazards

Affected Environment

The affected environment would be riparian corridors with SEZ and adjacent upland areas and existing service roads at each of the five park units.

Environmental Consequences

Project activities associated would require the use of certain hazardous materials, such as fuels, oils, or other fluids associated with the operation and maintenance of motorized vehicles, heavy equipment, and small motorized equipment (chainsaws, etc.). These fuels and fluids would generally be contained within vessels engineered for safe storage. However, spills, upsets, or other project-related accidents could cause an inadvertent release of fuel or other hazardous substances, resulting in a hazard to the public and the environment. Implementation of Avoidance Measure Hazmat-1 would reduce the potential for adverse impacts from these incidents to a less than significant level. Using chainsaws in the summer to fall trees could start a fire if fuels are sufficiently dry. If the fire is not put out immediately under environmental conditions, such as high winds and extreme temperatures, the fire could become a wildfire. Reduction of conifers in the riparian corridor would reduce risk of wildfire.

Airports and Schools

Areas of this project are located near airports and schools in the Tahoe City and South Lake Tahoe. The Tahoe City Middle and High Schools (ball field) are approximately 0.4

miles from the closest point of the project in Burton Creek State Park. Rideout School, part of the Tahoe Truckee School District, is encompassed by Ward Creek Unit. In South Lake Tahoe area, the Meyers School is approximately 0.1 mile east across the Truckee River from the nearest point from the project in Washoe Meadow State Park. The South Lake Tahoe Airport is approximately a mile from the closest point to the project in Washoe Meadows State Park.

Wildland Fire Hazards

The proposed project locations are in riparian and meadow areas surrounded by conifer forest. Chainsaws would be used to fell trees and cut tree slash and debris to smaller pieces. Improperly outfitted exhaust systems or friction between metal parts and/or rocks could generate sparks that could result in wildfire. Also pile burning could result in wildfire if prescribed fire prescription is not followed or due to an unpredicted weather event. Wildfire exposes people or structures to a significant risk of loss, injury, or death. Implementation of Minimization Measure Hazmat-2 below would reduce the potential for adverse fire-related impacts from this project to a less than significant level.

Avoidance, Minimization, and/or Mitigation Measures

Avoidance Measure HAZMAT-1: Fuel Spills

All equipment would be inspected by the operators for leaks immediately prior to the start of construction, and regularly inspected thereafter until equipment is removed from project locations.

- Areas would be designated for refueling, lubrication, and maintenance of equipment. Best management practices (BMP) would be employed as appropriate and necessary to contain, collect and dispose of hazardous materials. Hazardous materials would be lawfully disposed of outside of park boundaries.
- Areas designated for refueling, lubrication, and maintenance of equipment would be at least 100 feet from stream corridors, drainages, or seasonal swales.
- Equipment would be cleaned and repaired (other than emergency repairs) outside SEZ. All hazardous compounds would be contained and disposed of outside park boundaries, at a lawfully permitted or authorized destination.

Minimization Measure HAZMAT-2: Wildland Fire

- Chainsaws would be maintained in good working condition.
- In extreme weather and/or when fuels excessively dry, no chainsaw work would be conducted.
- Hand crew leaders and most hand crew members would have Basic Wildland Firefighting certification.
- Basic fire suppression equipment (hand tools, backpack pumps, etc.) is available in crew vehicles. Hand crews would call 911 or radio Northern Communications (DPR dispatch center) for additional firefighting resources as needed.

Cumulative Effects
The potential cumulative effects of the proposed action on hazardous waste/materials are expected to be minor.

3.3.5 Air Quality
Lake Tahoe sits in a high-elevation basin bounded by the Sierra Nevada Mountains to the west and the Carson Range to the east. This bowl-shaped air basin is susceptible to frequent occurrence of temperature inversion that limits air mixing and results in the concentration of air pollutants, particularly during early morning and evening hours. The source of the air pollutants that threaten Lake Tahoe water clarity are created locally within the basin, such as local urban and forest wood smoke, vehicle exhaust, and dust (Gertler et al. 2006). However, out of basin pollution is also contributed from the San Francisco Bay and Sacramento urban areas and smoke from wildfires.

Affected Environment
The Lake Tahoe Air Basin is comprised of the eastern portions of Placer and El Dorado counties in California and the western portions of Washoe, Douglas, and Carson City Counties in Nevada that encompass the Lake Tahoe hydrographic basin. Burton Creek State Park and Ward Creek Unit are located in the jurisdiction of the Placer County Air Pollution Control District. D.L. Bliss, Ed Z'berg-Sugar Pine Point, and Washoe Meadows State Parks are within the jurisdiction of the El Dorado County Air Quality Management District.

The California Air Resources Board (CARB) monitored the entire Lake Tahoe Air Basin for ambient air quality via a multi-agency cooperative agreement with the Nevada Division of Environmental Protection. CARB classifies air basins in the state for attainment or non-attainment of criteria pollutants in the air. Currently, the Lake Tahoe Air Basin is classified as attainment or unclassified/attainment for all the National Ambient Air Quality Standards criteria pollutants (CARB 2006). It is in attainment or unclassified for the California Ambient Air Quality Standards for all criteria pollutants except for the California State 24 hour Particulate Matter 10 (PM_{10}); however, it is in attainment for the annual average standard (CARB 2006).

The Tahoe Regional Planning Agency (TRPA) uses the air quality data for the Lake Tahoe Basin to check if the air quality threshold is met. In the TRPA 2001 Threshold Evaluation Report, non-attainment of thresholds by indicators included O_3 TRPA 1-hour; Regional visibility 90%; traffic volume; wood smoke; and vehicle miles traveled (TRPA 2002).

Sensitive receptors include residential areas and schools nearby the project sites. Burton Creek State Park is in the vicinity of Tahoe City. The Tahoe City Middle and High Schools (ball field) are approximately 0.4 miles from the closest point of the project in Burton Creek State Park. The northern boundary of the Ward Creek Unit is Ward Creek. North across Ward Creek from the park unit is a residential neighborhood. To

the south, Rideout School, part of the Tahoe Truckee School District, is encompassed by Ward Creek Unit. The west boundary of Washoe Meadows State Park is entirely residential and the east boundary has Echo View Estates, a small residential development. The Meyers School is approximately 0.1 mile east across the Truckee River from the nearest point from the project in Washoe Meadow State Park. Also across the Truckee River is the public golf course at Lake Valley State Recreation Area.

Environmental Consequences

The following factors have the potential to impact air quality at the five state park units over the course of this project:

- violation of ambient air quality standards;
- substantial contribution to an existing or projected air quality violation; and
- exposure of sensitive receptors to significant air pollution concentrations.

Felled trees and tree slash and debris would be removed from SEZ areas. In areas without vehicle access and over-snow tree removal, the tree debris would be piled for burning outside of SEZ in appropriate areas determined in consultation with regulatory agencies, DPR archaeologist and resources staff. With permits and under appropriate environmental conditions, the piles would be prescribed burned. This would result in the temporary increase in level of smoke. If combined with burning activities by other agencies or smoke from wildfires coupled with poor air movement, this has potential to a significant impact to sensitive receptors. However, if the minimization measures described in the section below are followed, direct impacts to air quality would be minimized.

There is potential to temporarily increase the level of dust in the air during trail obliteration and rehabilitation when scarifying or decompacting the way trail tread and recontouring the area to match the existing drainage patterns and slope.

Avoidance, Minimization, and/or Mitigation Measures

The mitigations are the responsibility of DPR. Implementation of the following mitigation measures would reduce each impact to a *less than significant level*.

Minimization Measure AIR-1: Dust

Vehicles would drive 15 miles per hour or slower when driven over dirt roads to minimize the creation of dust.

Minimization Measure AIR-2: Pile Burning

Pile burning would be conducted in project areas, outside of SEZ, where there is no vehicle access or reasonable regulatory agency-approved method to remove the tree remains and debris from the project site.

- Piles would be cured a year before burning to reduce the amount of smoke and chemical emissions.

Minimization Measure AIR-3: Regulations Compliance

DPR would write a smoke management plan (SMP) that includes identifying smoke sensitive areas (i.e., residences in project vicinity, schools, etc.) and submit it to the appropriate air quality regulator, El Dorado Air Quality Management District or the Placer Air Pollution Control District, for approval. The air quality regulator would limit the timing, location, amount and extent of burning to minimize possible adverse effects to sensitive receptors. DPR would also obtain a burn permit from the United States Forest Service, Lake Tahoe Basin Management Unit.

- All burning would comply with air quality regulations.
- Pile burning would be distributed over a period of time and conducted under environmental conditions that would limit impacts on the public.
- DPR would cooperate and coordinate with other public agencies that may be burning and sharing the same air basin to prevent exceeding the pollution standard determined by the air quality agencies.

Minimization Measure AIR-4: Burning Alternatives

- Where accessible, the tree slash and debris would be chipped and hauled away.
- Where accessible, tree and downed woody biomass would be removed to reduce smoke emissions.

Minimization Measure AIR-5

Depending on the soil dryness and wind conditions, the trail removal and rehabilitation areas would be sprayed with water to hinder windborne dust.

Cumulative Effects

The forests of the Lake Tahoe Basin have evolved with fire. However, decades of fire suppression have accumulated excessive fuels and high density of trees to the point where any ignition of fire can result in catastrophic wildfire. In order to decrease the present fuel loads and unhealthy tree densities, forests are being thinned of trees but in the process creating tree slash and debris. Chipping and prescribed burning are to methods to dispose of tree slash and debris. Prescribed fire is a major source of smoke emissions in the Lake Tahoe Air Basin. Besides DPR, other public lands management and fire agencies in the Basin conduct prescribe fires. Because of this, prescribed fire is regulated by air regulatory agencies. Prescribed fire, including pile burning, must adhere to a Smoke Management Plan prepared for the project and must be approved by the air regulatory agencies. The air regulatory agencies decide when favorable weather conditions exist to minimize effects on sensitive receptors. The proposed action contributes only to short-term air quality burn piles and trail obliteration and rehabilitation impacts. These activities associated with the proposed project would have minor, temporary adverse impacts on air quality in the region. In the long-term, it is expected that this project would have a cumulative beneficial improvement to air quality in Lake Tahoe when compared to the smoke emissions of a catastrophic wildland fire.

3.3.6 Noise

TRPA Goals and Policies (1986) has two sets of standards, one for single noise events and one for cumulative noise events in the community. See Appendix F for the TRPA Noise Event Standards tables. Single noise events are by identified by source [i.e., aircraft, watercraft, vehicles (on and off road)], and snowmobiles). Cumulative noise sources by land use category (i.e., high and low density residential, commercial, industrial, urban/rural outdoor recreation, wilderness/roadless areas, and wildlife areas. Thresholds and are set in decibels based on threshold noise for single noise events and average noise level of background noise levels for cumulative noise events.

Affected Environment

The project areas are primarily located in the interior of the park units such as Burton Creek, Ed Z'berg-Sugar Pine Point, and D.L. Bliss State Parks. However, there are some residential areas adjacent or in the vicinity the project and park boundaries. The project areas in Ward Creek Unit and Washoe Meadows State Park are located adjacent or near residential developments. At Ward Creek Unit along the north side of Ward Creek is a residential neighborhood with houses/backyards backed up to and on the creek. The distance from the project boundary to the closest house is about 50-60 feet across Ward Creek. At Washoe Meadows State Park, residential neighborhoods are adjacent to the entire west side of the park unit. On the upper northeast quarter of the park unit, Echo View Estates housing development is located across Sawmill Street, approximately 165 feet away.

Environmental Consequences

Tree removal (manual and over snow) and trail obliteration noise levels at and near the project areas would fluctuate, depending on the type and number of construction equipment operating at any given time, and possibly would exceed ambient noise standards in the immediate vicinity of the work for periods of time. Chainsaws would be used to remove trees and cut slash and tree debris. Heavy equipment such as a tracked harvester and forwarder would be used in designated areas for the over the snow removal of trees. In areas not adjacent or near residential development, over-snow operations may work extended hours into the evening to take advantage of limited snow conditions and time to complete the work. Logs would be decked at designated landings and logging trucks would remove trees out of park when road conditions would permit transport without causing road damage. Heavy equipment, rototiller, or small engine machines may be used in decompacting trails at Ed Z'berg-Sugar Pine Point State Park and also removal of debris out of SEZ areas. Depending on the specific activities being performed, short-term increases in ambient noise levels could result in speech interference at the work site and a potential increase in annoyance to visitors and staff. As a result, tree removal-generated noise would be considered to have a potentially significant short-term impact to these people.

Tree removal activity would not involve the use of equipment or techniques that could generate significant ground vibration or noise. Minor vibration immediately adjacent to

heavy equipment would only be generated on a short-term basis during the winter for over-snow operations in limited areas at D.L. Bliss, Ed Z'berg-Sugar Pine Point, and Washoe Meadows State Park. Typically the snow dampens the vibrations and noise generated by the equipment. Therefore, ground-borne vibration or noise generated by the project would have a less than significant impact.

Once the proposed project is completed, all related project noise would disappear. No activities within the scope of the proposed project would result in a substantial permanent increase in ambient noise levels.

Avoidance, Minimization, and/or Mitigation Measures

Minimization Measure NOISE-1

Manual tree removal and trail obliteration activities would be limited to the daylight hours, Monday – Friday. Over snow tree removal in areas adjacent or near residential housing neighborhoods would begin at 8 a.m. and stop by 6 p.m.

Minimization Measure NOISE-2

Internal combustion engines used for any purpose at the job site would be equipped with a muffler of a type recommended by the manufacturer.

Cumulative Effects

Development of the Lake Tahoe Basin has lead to increases in single event and background noises. Increase traffic levels on surface streets and highways and motorized recreation (for example, boats, motorcycles, snowmobiles, etc.) have contributed to the noise levels in the Basin. This project and other tree thinning and removal projects contribute to short-term noise increases but do not contribute significantly as sources of long-term background noise.

3.4 Biological Environment

The biological environment is the biological components that make up the landscape. This includes vegetation communities, plant and wildlife species, special status species, and invasive species. This section describes these biological components, the environmental consequences of the project, and addresses ways to mitigate potential impacts to the biological environment to insignificance.

3.4.1 Plant Communities

Plant communities or vegetation series (Sawyer and Keeler-Wolf 1995) found within the project at the park units in the Lake Tahoe Basin include aspen, mountain alder, montane meadow habitat, montane wetland shrub habitat, sedge, fen habitat, and conifer forest. All the series and habitats except for the conifer forest are relatively rare plant communities in the Lake Tahoe Basin and are being invaded by white fir, lodgepole pine, and Jeffrey pine trees.

Aspen Series

Quaking aspen (*Populus tremuloides*) is the dominant tree in the stand. Depending on the availability of light, a variety of herbaceous plants can occur in the understory. Aspen stands are found at Burton Creek and Sugar Pine Point State Parks and Ward Creek Unit.

Riparian/Mountain Alder Series

The dominant shrub is the mountain alder (*Alnus incana* ssp. *tenuifolia*) and lines the edges of creeks and meadows. This is typical at General Creek at Ed Z'berg-Sugar Pine Point State Park.

Montane Meadow Habitat

This habitat is a mixture of perennial herbs, grasses, and sedges in moist soil areas. This habitat is primarily found at Antone Meadows Natural Preserve in Burton Creek State Park and Washoe Meadows State Park.

Riparian/Montane Wetland Shrub Habitat

This series is dominated by willows, such as Lemmon willow (*Salix lemmonii*). A good example of this series is found at Antone Meadow State Preserve in Burton Creek State Park.

Sedge Series

The sedge series are found in wet and seasonally wet meadows as found in Burton Creek, Ed Z'berg-Sugar Pine Point, and Washoe Meadows State Parks. Some common plants found are the beaked sedge (*Carex utriculata*), inflated sedge (*Carex vesicaria*), Nebraska sedge (*Carex nebrascensis*), other sedge species (*Carex* species), rushes (*Juncus* species), and tufted hairgrass (*Deschampsia cespitosa*).

Fen Habitat

Fens are small wet areas associated with perennial springs or seeps. Unlike a sphagnum bog, the mineral-rich water is flowing and the pH is around neutral. Fens are highly dependent on the local hydrologic regime and very susceptible to changes or disturbances of the water flow and topography. The fens at Ed Z'berg-Sugar Pine Point and Washoe Meadows State Parks have cotton-grass (*Eriophorum gracile*), primrose monkeyflower (*Mimulus primuloides*), shore sedge (*Carex limosa*), sun dew (*Drosera rotundifolia*), tinker's penney (*Hypericum anaglloides*), other sedges (*Carex* species), rushes (*Juncus* species), and mosses, including three-ranked hump-moss (*Meesia triquetra*).

Mixed Conifer, Jeffrey Pine, White Fir, and Lodgepole Pine Series

Majority of the Lake Tahoe Basin is mixed conifer forest. The forest can be dominated by mixed conifer, Jeffrey pine (*Pinus Jeffreyi*), White fir (*Abies concolor*), or Lodgepole pine (*Pinus contorta* ssp. *murrayana*). These forests can contain trees of the species

not dominant and include incense cedar (*Calocedrus decurrens*) and sugar pine (*Pinus lambertiana*). Jeffrey pine series tends to dominate more xeric sites than lodgepole pine series. Lodgepole pine series is able to grow in mesic sites, even invading certain microhabitats in wet meadows and fens.

TPRA Goals and Policy (TRPA 1986) promote the conservation of plant species and plant communities in the Lake Tahoe Basin. The following are specific goals in found in Chapter IV: Conservation Element, Vegetation:

- Goal #1 states "Provide for the wide mix and increased diversity of plant communities in the Tahoe Basin."
- Goal #3 is to "conserve threatened and endangered, and sensitive plant species and uncommon plant communities of the Lake Tahoe Basin."
- Policy #1: Uncommon plant communities shall be identified and protected for their natural values. Of which wetland habitats including fens, bogs, and swamps are used as threshold indicators.

Affected Environment

Most of the park units are dominated by conifer forest. The riparian corridor and associated mesic areas carve linear swathes through the conifer forests and are locations of higher plant and animal diversity. The vegetation communities within the project areas along Burton Creek and the small unnamed drainage to the west at Burton Creek State Park include aspen series, montane meadow habitat, riparian/mountain alder series, sedge series, riparian/montane wetland shrub habitat and mixed conifer, Jeffrey pine, and lodgepole pine series. Antone Meadows and Burton Creek Natural Preserves encompass the riparian corridor of the Burton Creek. Natural Preserves protect significant natural resource(s) and limits the development and activities allowed in the preserve.

D.L. Bliss State Park project areas are along the Rubicon Creek, an unnamed tributary, and an unnamed seasonal drainage. The native plant communities include mostly riparian/mountain alder and mixed conifer forest series. Most of Rubicon Creek is on U.S. Forest Service property.

At Ed Z'berg-Sugar Pine Point State Park, General Creek riparian corridor is the project area. The natural communities that occur here include dominant riparian/mountain alder and conifer forest series, and include aspen, montane meadow habitat, fen habitat, and sedge series.

The natural communities on Ward Creek at the Ward Creek Unit are aspen series, riparian/mountain alder and mixed conifer forest series.

Washoe Meadows State Park is dominated by montane meadow habitat and sedge series. Conifer forest surrounds the meadows and fen habitat.

Aspen stands in Burton Creek and Ed Z'berg-Sugar Pine Point State Parks and Ward Creek Unit would have encroaching conifers removed to prevent overstory shading by conifers of the aspen stand.

Environmental Consequences

In the process of removing encroaching conifers, sensitive soils may be compacted or disturbed and non-target riparian vegetation damaged. In perennially wet areas, work crews would possibly compact and disturb sensitive soils, alter the hydrology of water flow, and impact non-target vegetation. If snow pack is not sufficient in depth and hardness, heavy equipment may possibly compact and/or disturb soils and damage non-target riparian vegetation. However, if removal and/or thinning of conifers are not done, riparian and meadow associated plant communities, especially aspens stands, would not survive in the long term. The implementation of the avoidance and minimization methods described in the section below would minimize adverse impacts to these sensitive resources.

Avoidance, Minimization, and/or Mitigation Measures

The mitigations are the responsibility of DPR. Implementation of the following mitigation measures would reduce each impact to a *less than significant level*.

Avoidance Measure PLANTCOM-1: Unusual Plants and Plant Communities in Perennial Wet Areas

Perennial wet areas with unusual plants and communities would be excluded from tree removal, i.e., fens and perennially wet meadows, because of their sensitivity and susceptibility to damage by work crews and the inability to have a sufficient snow pack to allow heavy equipment to work above it without breaking through.

Minimization Measure PLANTCOM-2: Hand Crews

Hand crews would be used to remove trees instead of heavy equipment during snow free months to decrease impacts to soil and vegetation.

Minimization Measure PLANTCOM-3: Timing of Work

- Hand crew work would be conducted late in the summer and/or fall when soils are driest and typically the native plant communities have set seed and beginning to senesce.
- Over-snow heavy equipment operations would be implemented in winter and early spring in limited and accessible areas when snow pack is of adequate depth and temperature/hardness to prevent damage to the underlying vegetation and moist soils beneath.

Avoidance Measure PLANTCOM-4: Prevention of Invasive Plant Spread

- Motorized equipment used for trail removal and rehabilitation would be washed of plant parts and soil if it had been working in areas known to have invasive plants

and/or at park units outside of the Lake Tahoe Basin in order to prevent the spread of non-native invasive plants.
- Weed-free local soil and mulch gathered from the project site vicinity would be primarily used for the removed trail rehabilitation to decrease the chance of introducing invasive non-native plants.

Cumulative Effects
The plant communities of the Lake Tahoe Basin have evolved with ecological disturbances, such as natural fire. Unless ecosystem processes of disturbance can be reintroduced (such as fire), plant communities accustomed to fire would disappear. However, decades of fire suppression have accumulated excessive fuels, lead to high density of trees, and conifer trees invading riparian areas, associated wetlands, and meadows to the point where any ignition of fire would possibly result in catastrophic wildfire. It is not safe to reintroduce fire to restore to such an ecosystem. Tree removal or thinning is a way to reduce the fuel though it does not have the same intangible benefits as fire. After removal of encroaching conifers, it is anticipated that the riparian hardwoods would respond favorably by increased growth and vigor due to an increase in light, nutrients, and water. Additional benefits of conifer tree thinning in riparian corridors and associated meadows would be maintaining the character of riparian and meadow areas and decreasing the risk of catastrophic wildfire. There are few projects that occur in riparian/SEZ areas because of the sensitivity of the soils and water quality. Overall, this project is expected to have minor cumulative effects on plant communities, including wetlands.

3.4.2 Wetland and Other Waters
The following are from the TRPA Goals and Policy (TRPA 1986) document in the TRPA Goals and Policy (TRPA 1986), Chapter IV: Conservation Element, Vegetation, Goal #2**:** Provide for the maintenance and restoration of such unique eco-systems as wetlands, meadows, and other riparian vegetation. Under this Goal are two policies specific to riparian plant communities.
Policy #1: Riparian plant communities shall be managed for the beneficial uses of passive recreation, groundwater recharge, and nutrient catchment, and as wildlife habitats.
Policy #2: Riparian plant communities shall be restored or expanded whenever and wherever possible. “Riparian plant communities are the single most important habitat for wildlife in the Basin and provide the most cost-effective means of water cleansing. Existing riparian plant communities shall be maintained in undisturbed conditions to promote such beneficial functions.”

TRPA’s goals and policies are implemented by both TRPA and Lahontan by special designation for wetlands and other waters known as Stream Environment Zones (SEZs). SEZs have additional regulations to protect them from damage. See Physical Environment, Water Quality Section 3.3.1 for description.

Affected Environment
The areas of the conifer tree removal treatment are primarily located in SEZ since the focus of this project is to restore and enhance riparian hardwoods.

Environmental Consequences
In the process of removing encroaching conifers, sensitive soils may be compacted or disturbed and non-target riparian vegetation damaged. In perennially wet areas, work crews would possibly compact and disturb sensitive soils, alter the hydrology of water flow, and impact non-target vegetation. If snow pack is not sufficient in depth and hardness, heavy equipment may possibly compact and/or disturb soils and damage non-target riparian vegetation. If removal of encroaching conifers is not implemented, riparian areas and associated meadows would in time be lost to conifer forest. The implementation of the avoidance and minimization methods described in the section below would minimize adverse impacts to these sensitive resources.

Avoidance, Minimization, and/or Mitigation Measures
See preceding section Natural Communities Avoidance, Minimization, and/or Mitigation Measures.

Cumulative Effects
See preceding section Natural Communities Cumulative Effects.

3.4.3 Plant Species
All subsections for Plant Species are handled in Subsection 3.4.5 Threatened and Endangered Species.

3.4.4 Animal Species
The Tahoe Regional Planning Agency Goals and Policies (1986) for wildlife two policies intended to maintain suitable habitat for all indigenous species by maintaining habitat diversity and preserve, enhance, and where feasible, expand habitats essential for threatened, endangered, rare or sensitive species. Policy #2 of the five policies for wildlife specifically states that riparian vegetation shall be protected and managed for wildlife. The TRPA Goals and Policies are implemented by the TRPA Code of Ordinances (1987). In Chapter 78: Wildlife Resources (TRPA 1987) the protection of wildlife and habitat are addressed in the following categories stream environment zones (SEZs), movement and migration corridors, critical habitat, and snags and course woody debris. Specifically Section 78.2 states no project or activity shall be undertaken within the boundaries of an SEZ unless it the purpose is for habitat improvement, vegetation management, dispersed recreation, or other permitted purposes.

Affected Environment
It is estimated that the Lake Tahoe Basin has 312 vertebrate species residents and migrants (Murphy and Knopp 2000). The following information is based on

observations made by park staff of the proposed project state park units. The state park units are host to a variety of mammals. The mammals and birds use riparian forests for concealment, cover, nest, and forage. The large mammals that use this habitat include black bear (*Ursus americanus*), mule deer (*Odocoileus hemionus*), and mountain lion (*Felix concolor*). These large mammals have large home ranges and could conceivably have the same individual frequent more than one park unit. The medium and smaller mammals observed in the parks units include coyote (*Canis latrans*), bobcat (*Felix rufus*), raccoon (*Procyon lotor*), beaver (*Castor canadensis*), porcupine (*Erethizon dorsatum*), long-tailed weasel (*Mustela frenata*), pine marten (*Martes americana*), various squirrels, chipmunks (*Tamias* spp.), and mice (*Peromyscus* spp.). Bird species, especially insectivores, are attracted to riparian corridors may include willow flycatcher (*Empidonax trailii*), yellow warbler (*Dendroica petechia*), dark-eyed junco (*Junco hymenalis*), and western tanager (*Piranga ludoviciana*).

Reptiles, amphibians, and fish comprise a small percentage of the wildlife found in the Lake Tahoe Basin and in the state park units. In coniferous forest areas, lizard and snake species that may be found include western fence lizard (*Sceloporus occidentalis*), northern and southern alligator lizards (*Gerrhonotus coeruleus* and *Elgaria multicrinata*, respectively), rubber boa (*Charina bottae*), and western garter snake (*Thamnophis elegans*). Amphibians are dependent on streams, ponds, and other bodies of water for reproduction and other aspects of their life. Amphibian species may include long-toed salamander (*Ambystoma macrodactylum*), pacific treefrog (*Hyla regilla*), and western toad (*Bufo boreas*). In the streams at the park units, fish species that may occur include rainbow trout (*Oncorhynchus mykiss*), brook trout (*Salvelinus fontinalis*), Piute sculpin (*Cottus beldingi*), Lahonton redside shiner (*Richardsonius egregious*), and Tahoe sucker (*Catostonmus tahoensis*). Both the rainbow and brook trout are non-native species.

Environmental Consequences

This project would remove trees in riparian corridors and on the edges of meadows. These plant communities are places for wildlife to nest and den, fledge, shelter, forage, and move across the landscape. Because of the importance of these habitats to wildlife, the tree removal would be conducted using hand crews in late summer and fall and in winter over-snow equipment. The trail obliteration and rehabilitation using hand crews and small and/or heavy equipment. The tree removal would occur over a period of time in areas of the park units. Depending on the number of trees removed along a water course could increase stream temperatures which would affect fishes and other aquatic life.

Avoidance, Minimization, and/or Mitigation Measures

Avoidance Measure WILDLIFE-1: Timing of Work

- Tree removal and trail obliteration/rehabilitation using hand crews would occur in the late summer and fall after the wildlife young are mobile and dispersing.

- Over-snow tree removal would occur in the winter and early spring prior to wildlife mating and breeding activities. See section 3.4.5 Threatened and Endangered Species regarding measures to avoid and minimize adverse affects of those special status wildlife species.

Avoidance Measure WILDLIFE-2: Marking Prescription

Tree marking prescription would allow for some areas of high density trees as places of refuge and other habitat in riparian corridors and along meadows. The prescription would avoid removing a number of trees that would contribute to increasing the water temperature and removal of shade cover of fish habitat.

Minimization Measure WILDLIFE-3: Aquatic Habitat

- See Avoidance Measure WILDLIFE 2: Marking Prescription above.

- See section 3.3.1 Water Quality for Best Management Practices (BMPs) to be implemented to avoid or minimize impacts to the aquatic habitat.

Cumulative Effects

See section 3.4.5. Threatened and Endangered Species for cumulative effects.

3.4.5 Threatened and Endangered Species

The specific policy in the Tahoe Regional Planning Agency Goals and Policies (1986) states a that a goal is to preserve, enhance, and where feasible, expand habitats essential for threatened, endangered, rare or sensitive wildlife species (Chapter 4 Conservation Element, Wildlife, Goal #2).

There are two policies especially applicable to special plant species in Chapter IV: Conservation Element, Vegetation (TRPA 1986), under Goal #3 (Conserve threatened and endangered, and sensitive plant species and uncommon plant communities of the Lake Tahoe Basin). The two policies are as follows:
Policy #2. The population sites and critical habitat of all sensitive plant species in the Lake Basin shall be identified and preserved.
Policy #3. The conservation strategy for Tahoe Yellow Cress in the Lake Tahoe Basin shall foster stewardship for this species.

The complementary goal for plant species is to conserve threatened, endangered, and sensitive plant species and uncommon plant communities (Chapter 4 Conservation Element, Vegetation, Goal #3). In the TRPA Code of Ordinances (1987), any habitat component of any wildlife species of concern that if diminished would reduce or impair a population is considered critical habitat and no activities that cause or threaten to cause critical habitat loss of any particular wildlife is allowed.

Affected Environment

The U.S. Fish and Wildlife listed species for Quadrangles South Lake Tahoe, Emerald Bay, Echo Lake, Kings Beach, Tahoe City, Homewood, and Meeks Bay indicate only three federally listed species and five candidate species. See Appendix G.

Common Name	Scientific Name	Listing Status
bald eagle	*Haliaeetus leucocephlus*	Threatened
delta smelt	*Hypomesus transpacificus*	Threatened
fisher	*Martes pennanti*	candidate species
Lahontan cutthroat trout	*Oncorhynchus clarki henshawi*	Threatened
mountain yellow-legged frog	*Rana mucosa*	candidate species
Tahoe yellow cress	*Rorippa subumbellata*	candidate species
Yosemite toad	*Bufo canorus*	candidate species

Of the species listed above, there are only one species, Tahoe yellow cress, known to be in the project site.

Special Status Plant Species

The Tahoe yellow cress (Federal candidate for listing and California endangered and Nevada critically endangered) that only occurs on the shores of Lake Tahoe. It is found growing in sand and in rocky areas, and has even been found in sand filled cracks of boulders and cement. The DPR is a signatory to the Tahoe Yellow Cress Conservation Strategy, a lake-wide effort to maintain and perpetuate this rare plant. As an active participant, DPR takes a proactive approach to protecting TYC on its shoreline properties. A cluster of four Tahoe yellow cress (TYC) plants are found at the mouth of General Creek at Ed Z'berg-Sugar Pine Point State Park. These plants are located on the high beach and are fenced and signed to prevent trampling. The DPR also participates in experimental reintroduction of the plant per the TYC Conservation Strategy (Pavlik and Murphy 2002) and has reintroduced plants at Lester Beach, D.L. Bliss State Park and at Avalanche beach at Emerald Bay State Park.

In addition to federal and state rare, threatened, and endangered lists, there are two other lists of special status species in the Lake Tahoe Basin. They are the U.S. Forest Service, Lake Tahoe Basin Management Unit and the Tahoe Regional Planning Agency. See Appendix G for special status species in the Lake Tahoe Basin.

At Washoe Meadows State Park, the marsh skullcap (*Scutellaria galericulata*) occurs in lower montane coniferous forest, moist meadows and seeps, and marshes and swamps. It is found in Angora Meadow. The marsh skullcap is a California Native Plant Society (CNPS) list 2: plants rare, threatened, or endangered in California, but more common elsewhere.

Although no known occurrences of special status species have been documented, there is sensitive plant habitat present in the project areas and have the potential to occur. The following plant species are most potentially found in the project area:

Common Name	Scientific Name	CNPS ranking
American mannagrass	(*Glyceria grandis*)	2.3
Bolanders candle moss	(*Bruchia bolanderi*)	2.2
broad-nerved hump-moss	(*Meesia uliginosa*)	2.2
Common moonwort	(*Botrychium lunaria*)	2.3
Mingan moonwort	(*B. minganense*)	2.2
Slender moonwort	(*B. lineare*)	1B.3
Scalloped moonwort	(*B. crenulatum*)	2.2
Subalpine fireweed	(*Epilobium howellii*)	1B.3
Upswept moonwort	(*B. ascendens*)	2.3
Western goblin	(*B. montanum*)	2.1

Special status wildlife species

In addition to the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (DFG) rare, threatened, and endangered lists, there are two additional lists of special status/threshold species in the Lake Tahoe Basin. They include the U.S. Forest Service, Lake Tahoe Basin Management Unit Sensitive Species List and the Tahoe Regional Planning Agency Special Interest Species. See Appendix G.

The following special status wildlife species are known to occur in the project area from joint annual surveys conducted by DPR and U.S. Forest Service or DPR surveys. The northern goshawk (*Accipiter gentilis*) and California spotted owl (*Strix occidentalis*) have nest and/or breeding territory in Burton Creek and Ed Z'berg-Sugar Pine Point State Parks. The mountain beaver (*Aplodontia rufa* ssp. *californica*) occurs at D.L. Bliss and Ed Z'berg-Sugar Pine Point State Parks. The mountain beaver location is not within the project boundary.

Other special status wildlife species mentioned in the U.S. Fish and Wildlife and other special status species lists would not be affected by this project. Bald eagle (*Haliaeetus leucocephlus*) and osprey (*Pandion haliaetus*) nest near or along the shoreline at D.L. Bliss and Emerald Bay State Parks; however their nests would not be affected by this project because of the over 0.5 mile distance away from the project area and late fall work period. Delta smelt is not found in the Lake Tahoe watershed. The fisher is an elusive and rare mammal with very large home range. This project would not affect this mammal because project work would begin after breeding and dispersal of young have occurred. Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*) would not be affected by this project as this species currently does not occur in the project site streams and with Best Management Practices implemented. The only occurrence is a reintroduction at Fallen Leaf Lake. There is only one known mountain yellow-legged

frog (*Rana mucosa*) population in the Lake Tahoe Basin at Trout Creek in the South Lake Tahoe area. Yosemite toad has no record of occurrence in the Lake Tahoe basin.

Environmental Consequences

Hand crew and over-snow tree removal would impact special status plant and wildlife species unless measures are taken to avoid or minimize adverse impacts. There would be potential to impact to special status plant species such as Tahoe yellow cress, marsh skullcap, and the plant species listed in the table under special status plant species in this section. There would be potential to impact to special status wildlife species, i.e., northern goshawk, California spotted owl, and mountain yellow-legged frog. Washoe Meadows State Park is closest to this one known occurrence of mountain yellow-legged frog (*Rana mucosa*) population in the Lake Tahoe Basin.

Avoidance, Minimization, and/or Mitigation Measures

The following mitigations are the responsibility of DPR. Implementation of the following mitigation measures would reduce each impact to a *less than significant level*.

Avoidance Measure SS PLANT-1: Pre-Project Surveys

Prior to hand crews working in an area, a qualified botanist would conduct special status plant species survey in the appropriate habitat and time of year and use Department of Fish and Game approved survey method. If any special status plant species is found, a California Natural Diversity Database (CNDDB) form would be submitted and depending on the plant's listing status, DFG and/or USFWS would be notified. The special status plants would be demarcated and avoided by work crews.

Avoidance SS PLANT-2: Known Special Status Species

- The hand crews would be briefed about Tahoe yellow cress and the fenced enclosure location at Ed Z'berg-Sugar Pine Point State Park. The fenced area would be avoided by the hand crews.
- Prior to working in the Angora Meadow area at Washoe Meadows State Park, the marsh skullcap in the vicinity of the work area would be flagged by DPR resources staff and avoided by hand crews.

Avoidance Measure SS PLANT-3: New Discovery

Any discovery or sighting of a Federal or State-listed or sensitive species is observed before or during project implementation would be reported to the DPR resources staff. These plants would be demarcated and avoided during the project work.

Avoidance Measure SS WILDIFE-1: Tree Marking

In areas where there are known sensitive raptor nest trees, the DPR forester in consultation with the DPR wildlife biologist would designate and mark trees for removal. Piles of felled trees, slash, and debris within a 0.25 mi radius of sensitive raptor nests

would be burned in fall after the young have fledged in consultation with the DPR wildlife biologist.

Avoidance Measure SS WILDIFE-2: Annual Surveys

Annual sensitive raptor surveys conducted by DPR wildlife biologist would determine if existing nesting territories are occupied.

- If the surveys determine the nest and nesting territories are not active, project sites in the vicinity of the nest or within nesting territory would be worked if approved by the DPR wildlife biologist.
- When sensitive raptor breeding and nesting habitat is determined to be occupied, a 0.25 mile buffer of no disturbance would be established and monitored.

Avoidance Measure SS WILDLIFE-3: Pre-Project Mountain yellow-legged frog surveys

Prior to hand crews working in an area near water at Washoe Meadows State Park, a qualified wildlife biologist would survey for mountain yellow-legged frog habitat. If suitable habitat is found, the qualified wildlife biologist would conduct mountain yellow-legged frog survey using an approved survey method in the appropriate habitat and time of year. If mountain yellow-legged frogs are found, DFG and/or USFWS would be notified and consulted.

Avoidance Measure SS WILDIFE-4: Timing Work

The project work with hand crews would work during the late summer and fall when fledging and denning are completed and the young have dispersed. Over-snow tree removal would occur prior to mating and nesting.

Cumulative Effects

Limited to riparian corridors and associated meadows with a prescription to remove invading conifer trees, this project is not expected to significantly change the riparian canopy or forest structure and subsequently contribute to significant adverse cumulative effects on wildlife and special-status species. An additional benefit of conifer tree thinning in riparian corridors and associated meadows would be maintaining the character of riparian and meadow areas and decreasing the risk of catastrophic wildfire which would have significant adverse impacts to wildlife and special-status species habitats. Consequently, this project is not expected to contribute to adverse cumulative effects on wildlife and special status species.

Chapter 4: List of Preparers and Coordination

4.1 List of Preparers

Following is a list of persons who contributed to preparation of this EA/IS. This list is consistent with the requirements set forth in NEPA and CEQA (40 CFS 1502.17 and Section 15129 of the State CEQA Guidelines).

DPR

Tamara Sasaki, Environmental Scientist

Rich Adams, Registered Professional Forester

Denise Jaffke, Associate State Park Archaeologist

Bureau of Reclamation

Doug Kleinsmith, Environmental Specialist

Adam Nickels, Archaeologist

4.2 Coordination

During preparation of this draft EA/IS, the lead agencies, USBR and DPR, consulted with agencies with specific expertise in project issues. These consultations assisted the lead agencies in determining the scope of this document, clarifying the description of the Proposed Action, and identifying the environmental and mitigation measures. Consultation included interagency communications and meetings. The lead agencies would solicit public and agency input on the Proposed Action by encouraging review of this EA/IS.

As previously mentioned, this EA/IS has been prepared in accordance with the requirements of NEPA, as amended (42 USC 4321 *et seq.*). USBR is also complying with other applicable laws, including the following:

Clean Air Act of 1972, as amended (42 USC 7401 *et seq*.). Section 176(c) of the Clean Air Act prohibits federal action or support of activities that do not conform to a State Implementation Plan.

Clean Water Act of 1972, as amended (33 USC 1251 *et seq*.). The Proposed Action is in compliance with Section 401 of the Clean Water Act. The Proposed Action would not result in placement of fill material into waters of the United States, including wetlands.

Endangered Species Act of 1973, as amended (16 USC 1531 *et seq.*). USBR has determined that the Proposed Action would not adversely affect any listed threatened or endangered species.

Fish and Wildlife Coordination Act of 1958, as amended (16 USC 661 *et seq.*). The USFWS under this act provided a list of potential Federal Endangered and Threatened Species that occur in or may be affected by projects in the counties and/or USGS 7.5 minute quadrangles (Echo Lake, Emerald Bay, Homewood, Kings Beach, Meeks Bay, Tahoe City, and South Lake Tahoe) for the preparation of the EA/IS.

National Environmental Policy Act of 1969, as amended (42 USC 4321 *et seq.*). This EA/IS was prepared pursuant to and in accordance with NEPA and the Council on Environmental Quality regulations implementing NEPA (40 CFR 1500-1508).

National Historic Preservation Act of 1966, as amended (16 USC 470). It has been determined that the Proposed Action would have no adverse effect on historic properties under Section 106 of the NHPA. USBR would comply with Section 106 of the NHPA and implementing regulations of 36 CFR 800 and would consult with the SHPO regarding this determination.

Farmlands Protection Policy Act. The purpose of the Farmland Protection Policy Act (FPPA) is to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. The FPPA ensures, to the maximum extent practicable, that federal programs are administered in a manner that is compatible with state, unit of local government, and private programs to protect farmland. The proposed action would not contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses.

Chapter 5: References

CARB (California Air Resources Board), Area Designations Maps / State and National, February 2006 Internet Address: http://www.arb.ca.gov/desig/adm/adm.htm

CDC (California Department of Conservation). Queried 9/12/06. Index to Maps of Official Earthquake Zones.

CNPS (California Native Plant Society). 2001. Inventory of Rare and Endangered Plants of California. http://www.consrv.ca.gov/CGS/rghm/ap/Map_index/index.htm

DPR (California Department of Parks and Recreation). 2005. Burton Creek State Park General Plan.

DPR (California Department of Parks and Recreation). 1992. Sugar Pine Point State Park Preliminary Resource Element.

Gertler, A.W., A. Bytnerowicz, T.A. Cahill, M. Arbaugh, S. Cliff, J. Kahyoglu-Koracin, L. Tarnay, R. Alonso, and W. Fraczek. 2006. Local air pollutants threaten Lake Tahoe's clarity. California Agriculture. http://californiaagriculture.ucop.edu/0602AMJ/pdfs/1_AirPollutants.pdf

Gross, Shana. Rare Plant Coordinator, U.S. Forest Service, Lake Tahoe Basin Management Unit. Personal communication.

Indian Trust Assets. 2006. The Library of Congress, Thomas webpage. Queried 9/7/06. http://thomas.loc.gov/cgi-bin/bdquery/z?d108:HR00074:@@@L&summ2=m&

Jaffke, D. 2006. Archaeological Survey Report for the Riparian Hardwood Restoration Project, California State Parks-Lake Tahoe. Unpublished report

LRWQCB (Lahontan Regional Water Quality Control Board). 1994. The Water Quality Control Plan for the Lahontan Region, Chapter 5: Lake Tahoe. http://www.swrcb.ca.gov/rwqcb6/BPlan/Bplan.pdf

Maher, J. U.S. Forest Service, Lake Tahoe Basin Management Unit Archaeologist. 9/12/06.

Manley, P.N. and M.D. Schlesinger. 2001. Riparian biological diversity in the Lake Tahoe Basin. Final report for the California Tahoe Conservancy and the U.S. Forest Service Riparian Grant #CTA-3024.

Murphy D.D. and C.M. Knopp, eds. 2000. Watershed Assessment: Volume I and II. General Technical Report PSW-GTR-175. Pacific Southwest Research Station, U.S. Forest Service.

NRCS (National Resource Conservation Service). 1974. Soil Survey: Tahoe Basin Area, California and Nevada.

Pavlik, B. and D. Murphy. 2002. The Conservation Strategy for the Tahoe Yellow Cress. Prepared for the Tahoe Regional Planning Agency.

Sawyer, J.O. and T. Keeler-Wolf. 1995. The Manual of California Vegetation. California Native Plant Society.

Schlesinger, M.D. and J.S. Romsos. 2000. Appendix G: Vertebrate Species of the Lake Tahoe Basin. In Lake Tahoe Watershed Assessment: Volume II. Appendixes. General Technical report PSW-GTR-176. United States Department of Agriculture, U.S. Forest Service, Pacific Southwest Research Station.

TRPA (Tahoe Regional Planning Agency). 2002a. 2001 Threshold Evaluation Report, Chapter 2: Air Quality/Transportation. http://www.trpa.org/documents/docdwnlds/Threshold_Eval_2001/2-AQ%20FINAL.pdf

TRPA (Tahoe Regional Planning Agency). 2002b. 2001 Threshold Evaluation Report, Chapter 3: Water Quality. http://www.trpa.org/documents/docdwnlds/Threshold_Eval_2001/3-WQ%20FINAL.pdf

TRPA (Tahoe Regional Planning Agency). 1986. Regional Plan for the Lake Tahoe Basin: Goals and Policies.

TRPA (Tahoe Regional Planning Agency). 1987. Code of Ordinances. Updated in 2004. Section IX: Resource Management, Chapter 78: Wildlife Resources.

Walck, C. DPR Sierra District Hydrologist. Personal communications. 9/11/06

Appendix A: CEQA Initial Study Checklist

Initial Study / Environmental Checklist

1. Project Title:
Riparian Hardwoods Restoration and Enhancement Project

2. Lead Agency Name & Address:
California Department of Parks and Recreation

3. Contact Person & Phone Number:
Tamara Sasaki, 530/581-4315

4. Project Location:
Burton Creek State Park, Tahoe City area, Placer County
D.L. Bliss State Park, El Dorado County
Ed Z'berg-Sugar Pine Point State Park, Tahoma area, El Dorado County
Ward Creek Unit, Placer County
Washoe Meadows State Park, Meyers/South Lake Tahoe area, El Dorado County

5. Project Sponsor Name & Address:
California Department of Parks and Recreation
Sierra District
P.O. Box 266
Tahoma, CA 96142-0266

6. General Plan Designation:
Burton Creek State Park 2005
No general plans for D.L. Bliss, Ed Z'berg-Sugar Pine Point, and Washoe Meadows State Parks and Ward Creek Unit.

7. Zoning:
Burton Creek State Park—Placer County Resource Protection/TRPA PAS: Conservation
Ward Creek Unit—Placer County Timberland/TRPA PAS: Conservation
Ed Z'berg-Sugar Pine Point State Park—TRPA PAS: Recreation
D.L. Bliss State Park—TRPA PAS: Recreation
Washoe Meadows State Park—TRPA PAS: Recreation

8. Description of Project:
The project will restore and enhance approximately 200 acres of 844 acres identified of riparian hardwoods in five state park units and remove and rehabilitate about 0.5 mile of unnecessary way trails in the riparian corridor. If future funding becomes available, the California Department of Parks and Recreation (DPR) would treat additional acres within the identified 844 acres.

9. Surrounding Land Uses & Setting:
Typical surrounding land uses are residential, recreation, and timberland (State or U.S. Forest Service).

10. Approval Required from Other Public Agencies:
U.S. Department of the Interior, Bureau of Reclamation

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact", as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agricultural Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Hazards & Hazardous Materials	☐ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☐ Noise	☐ Population/Housing
☐ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities/Service Systems	☐ Mandatory Findings of Significance	☒ None

DETERMINATION

On the basis of this initial evaluation:

I find that the proposed project **COULD NOT** have a significant effect on the environment and a **NEGATIVE DECLARATION** will be prepared. ☐

I find that, although the original scope of the proposed project **COULD** have had a significant effect on the environment, there **WILL NOT** be a significant effect because revisions/mitigations to the project have been made by or agreed to by the applicant. A **MITIGATED NEGATIVE DECLARATION** will be prepared. ☒

I find that the proposed project **MAY** have a significant effect on the environment and an **ENVIRONMENTAL IMPACT REPORT** or its functional equivalent will be prepared. ☐

I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated impact" on the environment. However, at least one impact has been adequately analyzed in an earlier document, pursuant to applicable legal standards, and has been addressed by mitigation measures based on the earlier analysis, as described in the report's attachments. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the impacts not sufficiently addressed in previous documents. ☐

I find that, although the proposed project could have had a significant effect on the environment, because all potentially significant effects have been adequately analyzed in an earlier EIR or Negative Declaration, pursuant to applicable standards, and have been avoided or mitigated, pursuant to an earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, all impacts have been avoided or mitigated to a less-than-significant level and no further action is required. ☐

*Signature on Original Document*_____ _____

Tamara Sasaki — Date

Environmental Scientist

_____

Printed Name

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers, except "No Impact", that are adequately supported by the information sources cited. A "No Impact" answer is adequately supported if the referenced information sources show that the impact does not apply to the project being evaluated (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on general or project-specific factors (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must consider the whole of the project-related effects, both direct and indirect, including off-site, cumulative, construction, and operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether that impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate when there is sufficient evidence that a substantial or potentially substantial adverse change may occur in any of the physical conditions within the area affected by the project that cannot be mitigated below a level of significance. If there are one or more "Potentially Significant Impact" entries, an Environmental Impact Report (EIR) is required.

4. A "Mitigated Negative Declaration" (Negative Declaration: Less Than Significant with Mitigation Incorporated) applies where the incorporation of mitigation measures, prior to declaration of project approval, has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact with Mitigation." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR (including a General Plan) or Negative Declaration [CCR, Guidelines for the Implementation of CEQA, § 15063(c)(3)(D)]. References to an earlier analysis should:

   a) Identify the earlier analysis and state where it is available for review.

   b) Indicate which effects from the environmental checklist were adequately analyzed in the earlier document, pursuant to applicable legal standards, and whether these effects were adequately addressed by mitigation measures included in that analysis.

   c) Describe the mitigation measures in this document that were incorporated or refined from the earlier document and indicate to what extent they address site-specific conditions for this project.

6. Lead agencies are encouraged to incorporate references to information sources for potential impacts into the checklist or appendix (e.g., general plans, zoning ordinances, biological assessments). Reference to a previously prepared or outside document should include an indication of the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be appended to this document. Sources used or individuals contacted should be listed in the source list and cited in the discussion.

8. Explanation(s) of each issue should identify:
   a) the criteria or threshold, if any, used to evaluate the significance of the impact addressed by each question **and**
   b) the mitigation measures, if any, prescribed to reduce the impact below the level of significance.

ENVIRONMENTAL ISSUES

I. AESTHETICS.

ENVIRONMENTAL SETTING

Lake Tahoe is a large, high elevation (approximately 6,223 ft.) lake in the Sierra Nevada Mountains. The lake sits in a basin encompassed by the Crystal range to the west and the Carson range to the east. The border between California and Nevada divides the lake. Lake Tahoe Basin is approximately 20 miles southwest of Reno, Nevada and approximately 80 miles northeast of Sacramento, California.

Within the Lake Tahoe Basin, Burton Creek State Park (SP), D.L. Bliss SP, Ed Z'berg-Sugar Pine Point SP, Ward Creek Unit, and Washoe Meadows SP are located on the California side. Burton Creek SP and Ward Creek Unit are located in Placer County. D.L. Bliss and Ed Z'berg-Sugar Pine Point SPs are located in El Dorado County. Most of the park units are adjacent to Lake Tahoe Basin Management Unit, U.S. Forest Service, private property, and/or California Tahoe Conservancy property.

The climate of the Lake Tahoe Basin is generally Mediterranean, characterized by relatively warm, dry summers, interrupted by occasional thunder showers, and cold winters. The proximity of the Basin to the Pacific Ocean can create mild temperatures and deep snows during the winter. The Basin is protected from the frigid continental desert climates of the Great Basin by mountain ranges immediately to the east. The annual mean temperature is about 45.5ºF for the Lake Tahoe Airport and about 42.3ºF for Tahoe City. The coldest month is February. The average winter daytime temperatures range from 28 ºF to 40ºF; nighttime lows range from the low teens to the low 20s. Average summer temperatures range from 60ºF to 80ºF during the day and lows of 35ºF to 40ºF during the night (DPR 1992).

Yearly average precipitation varies, with greater than 95% of the total annual precipitation occurring between October and January. Snow accounts for 75-80% of the total precipitation, with an average annual snowfall of 200 to 325 inches. Winter snow pack reaches a maximum depth in mid-March (DPR 1992).

Burton Creek SP is approximately 2000 acres and just northeast of Tahoe City on the north shore of Lake Tahoe. This unit has no developed facilities but does have a network of dirt logging roads and trails. Antone Meadow and Burton Creek Natural Preserves are located along Burton Creek.

D.L. Bliss SP is 957 acres and 280 acres are leased from the U.S. Forest Service. The California Department of Parks and Recreation (DPR) has a special use permit to manage and operate recreation facilities. It has campgrounds, day use area along the shoreline, and trails. There are beautiful views of Lake Tahoe from the Lighthouse and Rubicon Trails, Calawee Cove, and Lester Beach. D.L. Bliss SP is approximately seven miles north of the city of South Lake Tahoe.

Ed Z'berg-Sugar Pine Point SP is adjacent to the communities of Tahoma and Meeks Bay in El Dorado County. This unit is approximately 2,011 acres. The unit includes the Edwin L. Z'berg

Natural Preserve, campground, day use area, system of roads and trails, park buildings (District and administrative offices, maintenance shop) and employee residences. General Creek runs the length of the park and is a main feature of the park. The day use area is at the Ehrman Mansion historic complex. There is approximately 7,700 feet of shoreline along Lake Tahoe.

Ward Creek Unit is an unclassified property. Unclassified property is Department-owned or managed properties which are significant in terms of their resources values or their size. They are not proximate to or associated with an existing major classified unit. The Department anticipates that at some future date the State Park and Recreation Commission will officially classify most of them as new, individual units of the State Park System (DPR 2005). Ward creek is the most prominent feature at the unit.

Washoe Meadows SP encompasses approximately 628 acres with frontage along the Truckee River. The unit is surrounded by residential urban development. Lake Valley State Recreation Area is contiguous to Washoe Meadows SP. The Upper Truckee River forms a common boundary for these two state park units. There are diverse types of vegetation, including conifer forest, wet and dry meadows, fen, and riparian woodland that support a variety of wildlife within the state park. Both the Truckee River and extensive meadows are significant natural and aesthetic features of the unit.

The California Legislature initiated the California Scenic Highway Program in 1963, with the goal of preserving and protecting the state's scenic highway corridors from changes that would reduce their aesthetic value (CalTrans 2006). The State Scenic Highway System consists of eligible and officially designated routes. A highway may be identified as eligible for listing as a state scenic highway if it offers travelers scenic views of the natural landscape, largely undisrupted by development. Eligible routes advance to officially designated status when the local jurisdiction adopts ordinances to establish a scenic corridor protection program and receives approval from the California Department of Transportation. State Routes 89 and 128 around the northwest and north portions of Lake Tahoe in Placer County are two eligible state scenic highways. In El Dorado County, State Route 89 is a designated scenic highway along the southwest portion of Lake Tahoe. The riparian corridors in the project area are relatively perpendicular to the lake and intersect the State Routes which parallel above the shoreline.

WOULD THE PROJECT:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Criteria for Determining Significance
The analysis of determining the significance of impacts of the Proposed Action to Aesthetics is based on criteria **I** a-d, described in the environmental checklist above.

a) The project will not have a substantial adverse effect on a scenic vista. No Impact.

b) The riparian corridors that will have encroaching conifers removed and are adjacent to proposed or established state scenic highways include Burton Creek SP, D.L. Bliss SP, Ed Z'berg-Sugar Pine Point SP, and Ward Creek Unit. There is an overabundance of conifer trees in the riparian corridor. The removal encroaching conifer trees will improve the ability to see into the forest from the highways. At D.L. Bliss SP, thinning of conifers will increase the safety of ingress and egress by improving the line of sight to on coming traffic at the service road entrance and State route 89 intersection.

c) During over-snow tree thinning and removal, the visual character of some areas of the riparian corridor will be affected. The presence of over-snow equipment and stacked logs would present a limited, temporary adverse visual impact. However, this would occur in only three parks in limited areas: D.L. Bliss SP, Ed Z'berg-Sugar Pine Point SP, and Washoe Meadows SP.

d) The project does not create a new source of light or glare. No Impact.

II. AGRICULTURAL RESOURCES.

ENVIRONMENTAL SETTING

The Williamson Act of 1965 is the state's principal policy for the preservation of agricultural and open-space land. The program encourages landowners to work with local governments to protect important farmland and open space. Landowners can enroll parcels for a minimum of 10 years. This program helps local governments to restrict land to agricultural and compatible open space use. In doing so, land is assessed for property taxes at a rate consistent with its actual use, rather than the potential value of the land. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth.

The proposed project locations are within the boundaries of Burton Creek State Park (SP), D.L. Bliss SP, Ed Z'berg-Sugar Pine Point SP, Ward Creek Unit, and Washoe Meadows SP. These state park units do not contain lands which are zoned for agriculture use or are in agricultural use at the present time. Neither the state park units nor adjacent lands (federal, state, or private) are enrolled per the Williamson Act (CDOC El Dorado 2004, Placer 2005). None of the land within the state park units or the area immediately surrounding the park units are included in any of the Important Farmland categories, as delineated by the California Department of Conservation (CDOC 2004, 2005), under the Farmland Mapping and Monitoring Program.

WOULD THE PROJECT*:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	☐	☐	☐	☒

Criteria for Determining Significance

The analysis of determining the significance of impacts of the Proposed Action to Agricultural resources is based on criteria **II** a-c, described in the environmental checklist above.

DISCUSSION

a-c) As noted in the Environmental Setting above, the five state park units do not support any agricultural operations. All work proposed as part of this project would be confined within park boundaries. No land adjoining the park is zoned as agricultural land or used for agricultural purposes, as defined by the United States Department of Agriculture land inventory and monitoring criteria, modified for California (USDA 2006). Therefore, this project will have no impact on any category of California Farmland, conflict with any existing zoning for agricultural use or Williamson Act contract, or result in the conversion of farmland to non-agricultural use.

III. AIR QUALITY.

ENVIRONMENTAL SETTING

The existing air quality conditions in the proposed project area have been described in Section 3.3.5 of the Environmental Assessment.

WOULD THE PROJECT*:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Conflict with or obstruct implementation of the applicable air quality plan or regulation?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region	☐	☐	☒	☐

is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				
d) Expose sensitive receptors to substantial pollutant concentrations (e.g., children, the elderly, individuals with compromised respiratory or immune systems)?	☐	☒	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☒	☐	☐

* Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make these determinations.

Criteria for Determining Significance

The analysis of determining the significance of impacts of the Proposed Action to Air Quality is based on criteria **III** a-e, described in the environmental checklist above.

DISCUSSION

All discussion regarding air quality, associated impacts, and conditions placed on the proposed project have been addressed in Section 3.3.5 Air Quality of the Environmental Assessment.

IV. BIOLOGICAL RESOURCES.

ENVIRONMENTAL SETTING

The existing biological resource conditions in the proposed project area are described in Section 3.4 of the Environmental Assessment.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a)Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a sensitive, candidate, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	☐	☐	☒	☐
b)Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands, as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory	☐	☐	☒	☐

wildlife corridors, or impede the use of native wildlife nursery sites?				
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Criteria for Determining Significance

The analysis of determining the significance of impacts of the Proposed Action to Biological Resources is based on criteria **IV** a-f, described in the environmental checklist above.

DISCUSSION

All discussion regarding biological resources, associated impacts, and conditions and/or mitigations placed on the proposed project have been addressed in Section 3.4 Biological Environment of the Environmental Assessment.

V. CULTURAL RESOURCES.

ENVIRONMENTAL SETTING

The existing cultural resource conditions in the proposed project area are described in Section 3.2.1 of the Environmental Assessment.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Cause a substantial adverse change in the significance of a historical resource, as defined in §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

Criteria for Determining Significance

The analysis of determining the significance of impacts of the Proposed Action to Cultural Resources is based on criteria **V** a-c, described in the environmental checklist above.

DISCUSSION

All discussion regarding cultural resources, associated impacts, and conditions and/or mitigations placed on the proposed project have been addressed in Section 3.2.1 Cultural Resources of the Environmental Assessment.

VI. GEOLOGY AND SOILS.

ENVIRONMENTAL SETTING

Lake Tahoe lies within the Sierra Nevada Geomorphic Province. It occupies a basin surrounded by 9,000 foot peaks of the Sierra Nevada Mountains. The eastern and western sides of the basin are composed of granite rock, with minor amounts of older metamorphic rock. Volcanic rock, some deposited as recently as 2.5 million years ago, covers most of the northern part of the basin. The Sierra Nevada is a gently sloping fault block mountain range that was uplifted along its eastern edge. This range is bounded on the east and west by a series of interconnected fault segments. The displacement has been greater on the eastern margin, giving the Sierra Nevada a western tilt. South of Lake Tahoe, there is a single crest dividing the gentle western slope from the steep eastern scarp. The crest splits south of the lake, with one crest trending northwesterly and the other crest trending northward creating the Carson Range. This range separates the Carson Valley from Lake Tahoe. Lake Tahoe occupies the basin between the two uplifted crests. (DPR 2005).

Most of the soils in the Lake Tahoe Basin are of granitic or volcanic parent material. The soils are geologically young and poorly developed. Most soils are shallow, coarse textured, and have low cohesion, and contain small amounts of organic material. These attributes account for a high erosion potential on steeper slopes in the Tahoe Basin. There are a variety of soil types within the project area and among the five state park units. See Appendix E of the IS/EA for soil types and descriptions.

The topography of the project ranges from approximately 6,200 ft to 7,000 ft of the park units and limited to riparian corridors and edges of meadows.

The Preliminary Resource Element for Sugar Pine Point State Park (DPR 1992) characterizes the seismicity of the Lake Tahoe Basin. The fault activity has placed a major, geologically recent role in the evolution of the Tahoe Basin, and the potential for large destructive earthquake sometime in the future should be considered to be high. Rather than a single linear fault, the Sierra Nevada frontal fault system is a complex zone of faults along the eastern face of the Sierra Nevada. The western Lake Tahoe boundary fault, and the mountains that rise above the western edge of Emerald Bay, very likely represent a segment of the Sierra Nevada fault system

Based upon physiographic evidence, the main fault on the west side of the Lake Tahoe Basin probably lies less than a mile east of the shore at Ed Z'berg-Sugar Pine Point State Park, about 0.5 mile east of the shore at Rubicon Point, and continues south immediately offshore of Eagle Point, heading inland at Baldwin Beach.

Since the 1900's, a number of earthquakes with an intensity of less than 5.0 Richter magnitude

have been recorded in the Basin, although historical epicenters are more common to the north of Lake Tahoe and to the south-southeast of the Tahoe Basin along the Sierra Nevada frontal fault system. Both of these areas have experienced moderate to high magnitude earthquake activity measuring between 5.0 and 7.5 on the Richter scale.

Secondary seismic hazards, such as liquefaction and landslides, may occur during an earthquake. Liquefaction could occur in loose, granular materials (alluvium) below the water table, such as along stream channels and in unconsolidated, disturbed materials. It takes place when a granular material is transformed from a solid state to a liquid state during earthquake events. The potential for liquefaction as a result of seismic events is high in areas of unconsolidated and saturated fine-grained alluvium can occur such as at the mouth of creeks.

There are regulatory laws governing geologic protection and safety from geological hazards. For geologic and topographic features, the key federal law is the Historic Sites Act of 1935 which establishes a national registry of natural landmarks and protects "outstanding examples of major geological features." Topographic and geologic features are also protected under the California Environmental Quality Act (CEQA).

Other federal regulations include the Earthquake Hazard Reduction Act of 1977, Executive Order 12699 on Seismic Safety of Federal Buildings, and the Uniform Building Code (superseded in California by the 2001 California Building Code). State regulations include the Alquist-Priolo Earthquake Zone Act, the Field Act, the 2001 California Building Code, the Seismic Hazards Mapping Act, and the Historic Structures Act (California Public Resources Code Section 5028). Some state agencies have their own regulations covering seismic and geologic hazards.

In the Lake Tahoe Basin, TRPA Goals and Policies, Soils (1986), Goal #1 is stated as "Minimize soil erosion and the loss of soil productivity." This goal is to maintain soil productivity and existing vegetation cover and prevent excessive sediment and nutrient transport to streams and lakes.

WOULD THE PROJECT:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area, or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐

b)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable, as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property?	☐	☐	☐	☒
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste disposal systems, where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f)	Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	☐	☐	☐	☒

Criteria for Determining Significance
The analysis of determining the significance of impacts of the Proposed Action to Geology and Soils is based on criteria **VI** a-f, described in the environmental checklist above.

DISCUSSION

a) i) Although there is earthquake activity in the north and south of Lake Tahoe, the project site is not within an Alquist-Priolo Earthquake Fault Zone (CDC 2006).

ii) Seismic ground shaking may occur during an earthquake with an epicenter located in the vicinity of Lake Tahoe. However, seismic ground shaking should not affect the project and the employees and contractors working in the forest and open space.

iii) Landslides or mass wasting, is a downward movement of soils and rock under the pull of gravity. Mass wasting requires soils and rock, slope, and a triggering mechanism. Triggering mechanisms include earthquake shaking, heavy rainfall, and erosion. Landslides, rolling boulders, and snow avalanches are potential geological hazards in the park units with steep slopes, such as D.L. Bliss and Ed Z'berg-Sugar Pine Point State Parks. However, the topography within the riparian corridors of the project areas is composed of flat to gentle sloping areas. The absence of steep slopes within or immediately adjacent to the project site greatly minimizes the risk of landslides, avalanche, and rolling boulders.

iv) See iii) above.

b) A temporary increase in topsoil erosion may occur during trail obliteration activities. However, with appropriate Best Management Practices (see Environmental Assessment section 3.3.3 Geology, Mitigation Measures GEO-1: Trail Obliteration and Restoration), this will be avoided or minimized.

c) Soils on majority of the project sites are not unstable, except at the mouth of General Creek, and are not expected to become unstable. Therefore, there will be no impact from the project.

f) There are no known unique paleontological or geological resources that exist on the project site. Therefore, no impact to these resources is expected to occur as a result of this project.

VII. HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL SETTING

The existing hazards and hazardous material conditions in the proposed project area are described in Section 3.3.4 of the Environmental Assessment.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials, substances, or waste into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐
d) Be located on a site which is included on a list of hazardous materials sites, compiled pursuant to Government Code §65962.5, and, as a result, create a significant hazard to the public or environment?	☐	☐	☐	☒
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport? If so, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) Be located in the vicinity of a private airstrip? If so, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury, or death from wildland fires, including areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☒	☐	☐

Criteria for Determining Significance
The analysis of determining the significance of impacts of the Proposed Action to Hazards and Hazardous Materials is based on criteria **VII** a-h, described in the environmental checklist above.

Discussion

All discussion regarding biological resources, associated impacts, and conditions and/or mitigations placed on the proposed project have been addressed in Section 3.4 of the Environmental Assessment.

a,b) This project proposes to remove encroaching conifers and way trail obliteration in riparian corridor and meadow areas. This project will require the use of motorized equipment that requires the use of potentially hazardous materials, such as fuels, oils, or other fluids associated with the operation and maintenance of equipment, small engines, and heavy equipment (over-snow and trail decompaction equipment). These materials are contained in vessels engineered for safe storage. Large quantities of these materials will not be stored at or transported to the project site. Although commonly used materials such as fuels and oils would be used temporarily during the project to operate equipment, this impact is considered less than significant because mitigation measures and conditions would be adhered to, as discussed in Section 3.3.4 Hazardous Waste/Materials and Hazards.

c) There are existing schools within 1 mile of the project sites. Burton Creek SP is adjacent to the North Tahoe High School and Middle School, approximately 0.4 miles from the proposed project location. Rideout School, part of the Tahoe Truckee School District, is encompassed by Ward Creek Unit. This school is no longer a mainstream school, but currently this facility supports a limited number of home-schooled students (Tahoe Truckee School District 2006). Washoe Meadows SP southeast boundary is approximately 0.1 miles from Meyers Elementary school in Meyers, part of the Lake Tahoe Unified School District. The fuels and other materials safely contained would not pose a significant impact to the schools or their students. Pile burning of tree debris would emit smoke that contains potentially hazardous chemicals that could impact sensitive receptors such as children if not mitigated by specific timing and environmental conditions to avoid and minimize smoke output. See Air Quality 3.3.5 in the Environmental Assessment.

d) The Proposed Action would not occur on or near any hazardous materials sites compiled pursuant to Government Code Section 65962.5. Please refer to Section 3.3.4 for discussion.

e) The Washoe Meadows SP project site is within a two miles of the Lake Tahoe Airport. This project would not result in a safety hazard to people residing in the area or at the airport. No impact.

f) The project site is not in the vicinity of a private airstrip. No impact.

g) The project would not impair or interfere with an adopted emergency response plan or emergency evacuation plan. No impact.

h) Please refer to Section 3.3.4 Hazardous Waste/Materials and Hazards of the Environmental Assessment for discussion.

VIII. HYDROLOGY AND WATER QUALITY.

ENVIRONMENTAL SETTING

The existing hydrology and water quality conditions in the proposed project area are described in Section 3.3.1 of the Environmental Assessment.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?	☐	☐	☐	☒
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
f) Substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map, or other flood hazard delineation map?	☐	☐	☐	☒
h) Place structures that would impede or redirect flood flows within a 100-year flood hazard area?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury, or death from flooding, including flooding resulting from the failure of a levee or dam?	☐	☐	☐	☒

j) Result in inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Criteria for Determining Significance
The analysis of determining the significance of impacts of the Proposed Action to Hydrology and Water Quality is based on criteria **VIII** a-j, described in the environmental checklist above.

DISCUSSION

a) and b) This project will not violate water quality or waste discharge requirements. This project will not affect ground water supplies, volumes, recharge, or water tables.

c) No existing drainages will be altered by this project. There is a potential to alter existing drainage patterns if not mitigated by keeping vehicles on existing roads in SEZs. Any siltation impacts will be less than significant. Best Management Practices to reduce sediment-laden runoff are specified in Minimization Measure Geo-1; see section 3.3.3 Geology in Environmental Assessment.

d) and e) This project will not alter drainage patterns or alter a watercourse that would create or contribute surface runoff resulting in flooding or pollution.

f) There is a potential to degrade water quality. However, the implementation of Best Management Practices will minimize impacts to water quality. See Environmental Assessment, section 3.3.1 Water Quality, avoidance and minimization measures.

g) thru i) This project will not place housing or structures in 100 year flood hazard area or place people or structures at risk to flooding.

j) Although there is a potential for seiche or tsunami waves to occur in Lake Tahoe due to a geological events, this project will not result in the inundation by seiche, tsunami, or mudflow.

IX. LAND USE AND PLANNING.

ENVIRONMENTAL SETTING

The project sites are located in Placer and El Dorado Counties in California. Burton Creek SP and Ward Creek Unit are in Placer County. D.L. Bliss, Ed Z'berg-Sugar Pine Point, and Washoe Meadows State Parks are located in El Dorado County, California. Four of the state park units (Burton Creek, Ed Z'berg-Sugar Pine Point, and Washoe Meadows State Parks, and Ward Creek Unit) are owned by California Department of Parks and Recreation (DPR). At D.L. Bliss State Park, there is an inholding of property owned by the U.S. Forest Service, Lake Tahoe Basin Management Unit. The DPR has a Special Use Permit from U.S. Forest Service to operate facilities and allow recreation. This project excludes this U.S. Forest Service inholding property at D.L. Bliss State Park. The typical land use surrounding the state park units are a mixture of urban residential, recreation, and timberland (State or U.S. Forest Service lands).

For park units within the California State Parks System, the Department creates general plans.

General plans are broad policy documents that set the direction for park development and management for the next 20 years or more. However, not all parks have general plans, but other Departmental guidelines and directives help to ensure appropriate operations, management and projects are achieved. Other such guidance documents include the Department's cultural resource management directives and the Department's Operations Manual 0300, Natural Resources. Both these documents provide Department policy direction, definitions, processes, and procedures to guide the management of the natural and cultural resources for DPR. There are also Sierra District level plans such as the Lake Sector State Park Units in the Lake Tahoe Basin Wildfire Management Plan (2005). This wildfire management plan is a preplanning and implementation document should wildfire threaten or occur in a state park unit.

This project is for multiple park units in the Lake Tahoe Basin. Burton Creek State Park has a general plan and D.L. Bliss State Park, Ed Z'berg Sugar Pine Point State Park, Ward Creek Unit, and Washoe Meadows State Park do not have general plans at this time. This project is consistent with the Burton Creek State Park General Plan. This project for those parks without a general plan is consistent with the Department's cultural resource management directives and the Department's Operations Manual 0300, Natural Resources. This project is consistent with the District's Lake Sector wildfire management plan because it helps to reduce the fuel load within the riparian corridors.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with the applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Criteria for Determining Significance

The analysis of determining the significance of impacts of the Proposed Action to Land Use Planning is based on criteria **IX** a-c, described in the environmental checklist above.

DISCUSSION

a) The proposed project is completely within the boundaries of the State Park property. The project would add no barriers or elements that would divide or interfere with the established surrounding community. No impact.

b) As noted in the Environmental Setting and Discussion IX(a) above, the proposed project site is located within State Park property. No project elements are in conflict with the zoning, regulatory policies, land use plans, conservation plans, or ordinances for this area. All appropriate consultation and permits would be acquired, in compliance with all

applicable local, state, and federal requirements. No impact.

c) There is no applicable habitat conservation or natural community conservation plans in effect in the park units; therefore the project will create no conflict with such plans.

X. MINERAL RESOURCES.

ENVIRONMENTAL SETTING

There are currently no important mineral resources identified in the five state park units within the Lake Tahoe Basin per the Placer County General Plan (1994) and the El Dorado County Plan (2004).

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Result in the loss of availability of a known mineral resource that is or would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Criteria for Determining Significance

The analysis of determining the significance of impacts of the Proposed Action to Mineral Resources is based on criteria a and b described in the environmental checklist above.

DISCUSSION

a, b) No significant mineral resources have been identified within the boundaries of the five park units; therefore, the project would not result in the loss of availability of a known mineral resource nor a locally important mineral resource recovery site. In addition, In accordance with Public Resource Code § 5001.65, commercial exploitation of resources in the units of the State Park System is prohibited. No impact

XI. NOISE.

ENVIRONMENTAL SETTING

The existing noise conditions in the proposed project area are described in Section 3.3.6 of the Environmental Assessment.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Generate or expose people to noise levels in excess	☐	☐	☒	☐

of standards established in a local general plan or noise ordinance, or in other applicable local, state, or federal standards?				
b) Generate or expose people to excessive groundborne vibrations or groundborne noise levels?	☐	☐	☒	☐
c) Create a substantial permanent increase in ambient noise levels in the vicinity of the project (above levels without the project)?	☐	☐	☐	☒
d) Create a substantial temporary or periodic increase in ambient noise levels in the vicinity of the project, in excess of noise levels existing without the project?	☐	☐	☒	☐
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport? If so, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐
f) Be in the vicinity of a private airstrip? If so, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Criteria for Determining Significance

The analysis of determining the significance of impacts of the Proposed Action to Noise is based on criteria **XI** a-f, described in the environmental checklist above.

DISCUSSION

All discussion regarding noise, associated impacts, and conditions and/or mitigations placed on the proposed project have been addressed in Section 3.3.6 of the Environmental Assessment.

XII. POPULATION AND HOUSING

ENVIRONMENTAL SETTING

Burton Creek, D.L. Bliss, Ed Z'berg-Sugar Pine Point, and Washoe Meadows State Parks and Ward Creek Unit are located within the Lake Tahoe Basin. Below is a table showing the approximate driving distances from the park units and the nearest larger populated communities of Tahoe City and South Lake Tahoe.

Park Unit	Approximate Driving Distance from Tahoe City	Approximate Driving Distance from South Lake Tahoe (Intersection Highways 50 & 89)
Burton Creek State Park	0.25 miles	29 miles
D.L. Bliss State Park	17 miles	11 miles
Ed Z'berg-Sugar Pine Point State Park	10 miles	19 miles
Ward Creek Unit	3 miles	24.5 miles
Washoe Meadows State Park	31 miles	3 miles

In 2000, the population within the Lake Tahoe Basin (California and Nevada) was approximately 63,000 people (TRPA 2006). Majority of the population lives in the city of South Lake Tahoe. The Lake Tahoe Basin increased in population by approximately 2.4% average annual growth. Most of the summer visitors are from San Francisco Bay Area, followed by Southern California, other states, Central California, and Nevada.

Housing within the park boundaries is limited to Ed Z'berg-Sugar Pine Point and D.L. Bliss State Park. At Ed Z'berg-Sugar Pine Point State Park, the house is limited to mobile homes and seasonal employee cabins. The mobile home pads are currently rented to permanent park employees and are in use year-round. The seasonal cabins are rented to seasonal employees that work for the California Department of Parks and Recreation (DPR) in the summer/fall. At D.L. Bliss State Park, there are two State Park houses, one seasonal trail pad, and a seasonal dormitory. The DPR houses are rented to permanent park employees that live in the park year round. The trailer pad is occupied by seasonal employee as the rooms in the seasonal dormitory that are occupied in summer/fall. The permanent population of the park is relatively static, based on DPR staffing requirements, and no significant growth is anticipated in the foreseeable future.

	LESS THAN POTENTIALLY SIGNIFICANT IMPACT	SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

DISCUSSION

a,b,c) The project has no housing component and all work will take place within the confines of the five park units, without additions or changes to the existing local infrastructure. It will neither modify nor displace any existing housing and will displace no one, either temporarily or permanently. Jobs are not expected to be generated as a result of this project; therefore it will have no impact on population growth or housing.

XIII. PUBLIC SERVICES

ENVIRONMENTAL SETTING

All the California state park units in the Lake Tahoe Basin are located on State Responsibility Land in Placer and El Dorado Counties. The California Department of Forestry and Fire (CDF) has a legal responsibility to provide fire protection on all State Responsibility Lands. However, 80 percent of the lands within the Lake Tahoe Basin is owned and managed by the Lake Tahoe Basin Management Unit (LTBMU) of the U.S. Forest Service. CDF has an agreement with the Lake Tahoe Basin Management Unit of the U.S. Forest Service to provide fire protection to State Responsibility Lands in the Basin (Washington, personal communications). The U.S. Forest Service Fire Stations are located in Meeks Bay, Meyers, and Spooner Summit.

The size of the state and the numerous types of emergencies such as wildfire fires, floods, and earthquakes, require the cooperative efforts of federal, state and local agencies. The U.S. Forest Service provides service to the entire Lake Tahoe Basin in California and Nevada. The Fire Protection Districts work cooperatively with the U.S. Forest Service and adjacent Fire Protection Districts. The North Tahoe Fire Protection District provides service to the north and northwest shore that would include Burton Creek SP and Ward Creek Unit. Ed Z'berg-Sugar Pine Point SP and D.L. Bliss SP would be serviced by Meeks Bay Fire Protection District. The Lake Valley Fire Protection District with jurisdiction from Emerald Bay SP to Meyers would respond to emergencies at Washoe Meadows SP.

California Department of Parks and Recreation (DPR) Rangers are POST-certified Law Enforcement Officers responsible for public protection and law enforcement in the park. The Placer and El Dorado County Sheriff's Department responds to emergency calls and assists with criminal investigations.

Burton Creek SP is adjacent to the North Tahoe High School and Middle School, 0.4 miles from the proposed project location. Rideout School, part of the Tahoe Trucked School District, is encompassed by Ward Creek Unit. Currently this facility does not support students. However, it is planned to become the Cold Stream Alternative School where home schooled students take tests (Tahoe Truckee School District 2006). Washoe Meadows SP southeast boundary is approximately 0.1 miles from Meyers Elementary school in Meyers, part of the Lake Tahoe Unified School District.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Result in significant environmental impacts from construction associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:	☐	☐	☐	☒
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Criteria for Determining Significance

The analysis of determining the significance of impacts of the Proposed Action to Public Services is based on criteria **XIII** a, described in the environmental checklist above.

DISCUSSION

a) The project has no governmental facilities component; therefore impact to existing and no significant increase in any public service requirements.

XIV. RECREATION

ENVIRONMENTAL SETTING

The Lake Tahoe area is renowned for its beauty as well as its outdoor recreation. The park units are used for many different recreation activities year round. Park visitation predominantly occurs during summer and on weekends and holidays. In the snow free months, visitors are able to camp in the campgrounds at D.L. Bliss and Ed Z'berg-Sugar Pine Point State Parks; and picnic, hike, and mountain bike at all five of the park units. With shore access, visitors enjoy water sports such as kayaking, canoeing, motor boating, and scuba diving in the lake. During the winter, recreational activities such as sledding, cross-country skiing, and snowshoeing dominate.

Many of the service roads and trails within the state park units are used for hiking, biking, and cross-country skiing at appropriate seasons of the year. In winter the roads and trails at Burton Creek State Park are part of a cross country ski trail network maintained and operated by a concessionaire. At the Ed Z'berg-Sugar Pine Point State Park, the State Parks Foundation and West Shore Association, a group of business owners on the west shore of Lake Tahoe, are resurrecting portions of the historic 1960 Winter Olympic cross country ski trails at the park. The West Shore Association recently donated a snowmobile and grooming equipment and signed portions of the historic ski trails to help promote the cross country skiing and groom the

trails at the park.

Complete attendance records are kept for the developed park units including D.L. Bliss and Ed Z'berg-Sugar Pine Point State Parks. See tables below (DPR 2006)

D.L. Bliss State Park
Calendar Year Attendance

Calendar year	Paid Day Use	Free Day Use	Overnight Camping	Total Attendance
1996	27,594	857	48,639	77,090
1997	22,230	362	41,275	63,867
1998	29,712	0	37,312	67,024
1999	37,495	0	34,784	59,028
2000	37,495	0	57,155	94,650
2001	33,212	6,799	67,307	107,318
2002	8,073	6,036	66,758	80,867
2003	9,611	3,025	58,088	70,724
2004	9,093	0	57,314	66,407
2005	15,783	6,625	25,017	47,425
Total Attendance	217,046	23,704	493,650	734,400
Average Attendance	21,705	2,370	49,365	73,440

Ed Z'berg-Sugar Pine Point State Park
Calendar Year Attendance

Calendar year	Paid Day Use	Free Day Use	Overnight Camping	Total Attendance
2001	16,613	21,175	47,122	84,910
2002	10,484	23,739	54,206	88,429
2003	20,049	3,915	50,569	74,533
2004	29,501	3,963	51,729	85,193
2005	32,594	1,747	69,864	104,206
Total Attendance	109,241	54,539	273,490	437,271
Average Attendance	21,848	10,908	54,698	87,454

The proposed project will close portions of the Ed Z'berg-Sugar Pine Point State Park cross-country ski and snowshoe trails during over-snow tree removal operations. However, visitor services and the project manager will coordinate trail closures to ensure winter recreation continues.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of	☐	☐	☐	☒

the facility would occur or be accelerated?				
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

Criteria for Determining Significance
The analysis of determining the significance of impacts of the Proposed Action to Recreation is based on criteria **XIV** a,b described in the environmental checklist above.

DISCUSSION

a) The proposed project would likely not displace park visitors during construction to an existing neighborhood, regional parks, and other recreational facilities such that substantial physical deterioration effects to the facilities would occur or be accelerated would be insignificant. No impact.

b) The proposed project is a resource management project. It does not include recreational facilities or require the construction or expansion of such facilities. No impact.

XV. TRANSPORATION/TRAFFIC

ENVIRONMENTAL SETTING

The Lake Tahoe Basin is located on the California-Nevada border in the Sierra Nevada Mountains. Principle access to the Lake Tahoe Basin is by vehicle via Interstate Highway 80, by U.S. Highways 50 and 395, and by State Routes 28, 89, and 267. Driving time from Sacramento is approximately two hours under favorable driving conditions. Winter storm events and occasional landslides can close highways or contribute to significant driving delays. Major bus lines and railroad stations are located in Truckee and South Lake Tahoe. There are no direct commercial airline flights into the Lake Tahoe Basin.

The predominate mode of transportation used in the Lake Tahoe Basin is private vehicle (TRPA 2006). In the summer, there is much private vehicle traffic on the highways around the lake and at times, traffic congestion on these roads when combined with local traffic. The Tahoe Interregional/Intraregional Transit Study Final Report (TRPA 2006) studied strategies to expand on surface (bus, rail, or waterborne) public transportation network connecting the North and South Shoes, and connecting the Tahoe Region to nearby urban areas.

Streets and Highways
State Routes 28 and 89 and U.S. Highway 50 encompass the perimeter of Lake Tahoe. These main travel corridors experience high traffic volume from private vehicles.

Road Traffic and Level of Service
Level of service (LOS) measures how the route operates during peak hour traffic. Level of service summarizes the effects of speed, travel time, traffic interruptions, freedom to maneuver

and other factors. The performance of the county roads and highways is evaluated based on level of service (LOS) definitions. Six levels of service represent varying roadway conditions ranging from ideal: LOS "A" to forced flow: LOS "F." The areas of congestion are the intersections of Highway 50 and Highway 89 in South Lake Tahoe and in Tahoe City at the intersection of Highway 89 and Highway 28.

Level Of Service (LOS)	Description of Typical Traffic Conditions	Delay	Service Rating
A	Highest quality of service. Free traffic flow, low volumes and densities. Little or no restriction on maneuverability or speed, and a high level or comfort and convenience.	None	Excellent
B	Stable traffic flow – speed becoming slightly restricted; the presence of others in the traffic stream begins to be noticeable. Low resistance on maneuverability.	None	Very Good
C	Stable traffic flow, but less freedom to select speed, change lanes or pass. Comfort and convenience decreasing as density increases.	Minimal	Good
D	Approaching unstable flow. Speeds tolerable, but subject to sudden and considerable variation. Reduced maneuverability, driver comfort and convenience.	Minimal	Adequate
E	Unstable traffic flow with rapidly fluctuating speeds and flow rates. Short headways, low maneuverability and low driver comfort and convenience	Significant	Fair
F	Forced traffic flow. Speed and flow may drop to zero with high densities. Queues tend to form behind such locations since arrival flow exceed traffic discharges.	Considerable	Poor

Bicycle Traffic

The Lake Tahoe Regional Bicycle and Pedestrian Master Plan was developed in 2003 (Tahoe Metropolitan Planning Organization 2003). This plan provides a “blueprint for developing a regional bicycle and pedestrian system that includes both on-street and off-street facilities as well as support facilities and programs throughout the Lake Tahoe region.”

Air Traffic

Within the Lake Tahoe Basin, the Lake Tahoe Airport is the only airport that serves primarily the south shore of the lake. The Lake Tahoe Airport is owned and operated by the City of South Lake Tahoe, California. This little airport has a single runway and is for public use. Currently it does not allow commercial airline service, though it had in the past. The Lake Tahoe Airport is located approximately three air miles southwest of the downtown area of the city of South Lake Tahoe. Other airports that also serve the Lake Tahoe Basin include the Truckee Tahoe Airport (corporate and private planes) in Truckee, California and the Reno/Tahoe International Airport in Reno, Nevada. Washoe Meadows State Park is located less than two miles from the Lake Tahoe Airport.

Rail Traffic

Passenger: Rail service is limited to one daily Amtrak California Zephyr stop in each direction in Truckee, California. Amtrak Thruway Motorcoach service is provided to both Truckee and South Lake Tahoe for passengers connecting with the Capital Corridor rail service in Sacramento. (TRPA 2006)

Freight: Private companies, primarily the Union Pacific Railroad (UP) and the Burlington Northern Santa Fe (BNSF) railroad provide long distance freight movement of goods.

Bus Transportation

The Lake Tahoe Basin can be reached by bus service. Greyhound intercity bus service is provided along the Interstate 80 with a stop in Truckee (TRPA 2006). Also gambling casinos on the Nevada side often offer discount bus travel to gaming centers. Within the Lake Tahoe Basin, there are several local bus operators serving regions of the Basin. Tahoe Area Regional Transit (TART) serves the Truckee, northwest and northern region of Lake Tahoe. BlueGo serves primarily the city of South Lake Tahoe. There are various seasonal "Trolleys" that travel to highly visited locations and their schedules supplement the regional bus schedules.

Parking

During peak visitation in the summer, parking on paved surfaces is limited to a first-come, first-served basis at all the park units.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Cause a substantial increase in traffic, in relation to existing traffic and the capacity of the street system (i.e., a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☐	☒
b) Exceed, individually or cumulatively, the level of service standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Cause a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?	☐	☐	☐	☒
d) Contain a design feature (e.g., sharp curves or a dangerous intersection) or incompatible uses (e.g., farm equipment) that would substantially increase hazards?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Result in inadequate parking capacity?	☐	☐	☒	☐
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

Criteria for Determining Significance

The analysis of determining the significance of impacts of the Proposed Action to Transportation/Traffic is based on criteria **XV** a-g, described in the environmental checklist above.

DISCUSSION

a) The proposed project is resource management project and would not cause a substantial increase in traffic volume or result in additional congestion. The over-snow equipment would probably remain on-site for the duration of the tree removal treatment at each park. No impact.

b) This project will not exceed individually or cumulatively the established level of service standards. The only vehicle traffic expected to be generated by this project would be a few logging trucks removing logs for a small portion of time during the project. No impact.

c) The Washoe Meadows SP project site is located less than two miles of the Lake Tahoe Airport; however, it is not included in an airport use plan, in the vicinity of a private air strip, and does not serve as a normal reporting point for air traffic in the area. The proposed project would affect or change existing air traffic patterns. No impact.

d) No transportation-related change will result from this project. No impact.

e) All project activities associated with the project would occur within the boundaries of the five state park units and work would not restrict access to or block any road outside the immediate tree removal area. Although minor delays may occur along interior park roads during transport of equipment and chipping of tree debris and waste, minimum access requirements for emergency vehicles would be maintained at all times. Therefore, the impact of this project on emergency access or response would be less than significant.

f) Over-snow operations in Ed Z'berg-Sugar Pine Point State Park and D.L. Bliss State Park would use day use parking in the winter for cut logs. At Ed Z'berg-Sugar Pine Point SP in winter, the day use parking area is used by park employees for work and residential access. The project encroachment on these existing parking lots would be limited and temporary, continuing allowing access to the over-snow operations, employee access, and recreational areas. Less than significant impact.

g) There are no policies, plans, or programs supporting alternative transportation that apply to this project. No impact.

XVI. UTILITIES AND SERVICE SYSTEMS.

ENVIRONMENTAL SETTING

The project will be conducted within the boundaries of five state park units: Burton Creek State Park (SP), D.L. Bliss SP, Ed Z'berg-Sugar Pine Point SP, Ward Creek Unit, and Washoe Meadows SP. These State Park units are distributed around Lake Tahoe along State Route 128 (Burton Creek SP) and 89 (D.L. Bliss, Ed Z'berg-Sugar Pine Point SP, and Ward Creek Unit) and about 1 mile from Highway 50 (Washoe Meadows SP).

Utilities and services are available at the day use and campground facilities at both D.L. Bliss SP and Ed Z'berg-Sugar Pine Point SP. Day use areas provide picnic tables, barbecues, bathroom sinks, flush toilets, and garbage disposal. Campgrounds offer picnic tables, barbecues, campfire pits, water spikets, bathroom sinks, showers, flush toilets, and garbage disposal. There is also a trailer dump station at Ed Z'berg-Sugar Pine Point SP. At the historic

Ehrman Mansion complex also at Ed Z'berg-Sugar Pine Point SP, there are irrigated lawns and landscaping and a pier on the lake. Concessionaire provide seasonal kayak rentals at Lester Beach at D.L. Bliss SP.

Garbage collected in the park day use areas is removed by California Department of Parks and Recreation (DPR) personnel several times a day and deposited into commercial contract containers. These containers are picked up by the Tahoe Truckee Sierra Disposal.

Water supply sources for the park units vary. At this time, Burton Creek SP, Ward Creek Unit, and Washoe Meadows have no developed facilities and therefore, have no water supply systems. D.L. Bliss SP collects water from an unnamed tributary to Rubicon Creek. The water is collected in a catch basin and delivered by pipe to the park water plant. At the water plant, the water is filtered through a diatomaceous earth filter, chlorinated, and then pumped to two 250,000 gallon tanks and water is distributed gravity. The treated water is tested monthly for coliform and *E*. *coli* bacteria and raw water is subjected to a lauryl-triptose test annually as required by the California Department of Health Services and Environmental Protection Agency. Tahoe Cedars Public Utility District supplies Ed Z'berg-Sugar Pine Point SP with potable water. The well is located in the residential area of Tahoma, north/northeast of the park. (G. Payne 8/29/06).

At this time, Burton Creek SP and Ward Creek Unit have no developed facilities and do not require sewer disposal. Although not developed, Washoe Meadows SP has a South Lake Tahoe Public Utility District sewer line that bisects the park. At D.L. Bliss SP and Ed Z'berg-Sugar Pine Point SP, the sewage infrastructures within the park units are maintained by DPR staff. The sewage is then conveyed to the Tahoe City Public Utility District sewage system for treatment in Truckee, California.

Power and telephone service is provided to the entrance stations, and on-site offices and residences. Electrical power is provided by the Sierra Pacific Power over conventional overhead lines, except for Ed Z'berg-Sugar Pine Point SP where the power lines are underground. Telephone services are provided by AT&T Telephone Company via overhead lines, except for Ed Z'berg-Sugar Pine Point SP where the telephone lines are underground. Natural gas for utilities is provided by Southwest Gas to Ed Z'berg-Sugar Pine Point SP. The park units have numerous propane tanks that vary in size from 250 to 1000 gallons and propane is provided through a statewide services contract with Suburban Propane.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Exceed wastewater treatment restrictions or standards of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities?	☐ Yes	☒ No		
Would the construction of these facilities cause significant environmental effects?	☐	☐	☐	☒

c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities?	☐ Yes	☒ No		
	Would the construction of these facilities cause significant environmental effects?	☐	☐	☐	☒
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?	☐	☐	☐	☒
e)	Result in a determination, by the wastewater treatment provider that serves or may serve the project, that it has adequate capacity to service the project's anticipated demand, in addition to the provider's existing commitments?	☐	☐	☐	☒
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g)	Comply with federal, state, and local statutes and regulations as they relate to solid waste?	☐	☐	☐	☒

Criteria for Determining Significance

The analysis of determining the significance of impacts of the Proposed Action to Utilities and Service Systems is based on criteria **XVI** a-g, described in the environmental checklist above.

DISCUSSION

a) All five park units are within the jurisdiction of the Lahontan Regional Water Quality Control Board and the Tahoe Regional Planning Agency (TRPA). As designed the project will be in compliance with all applicable water quality standards and since this is a resource management project there would be no wastewater treatment requirements. No impact.

b,c) This project is a resource management project. Because it does not include or induce further development of park facilities, this project would not require or result in the construction of new water or wastewater and/or storm water drainage facilities or the expansion of said existing facilities. No impact.

d) This project is a resource management project. The existing water supplies are sufficient and there would be no requirement for new or expanded entitlements. No impact.

e) This project is a resource management project. It does not propose any development or construction which would result in a determination that there is inadequate capacity to service the project's anticipated demand in addition to the already existing commitments. No impact.

f) This project is a resource management project. It is not anticipated that this project would increase solid waste disposal at a local landfill. The tree debris will be piled and burned in appropriate areas in the project site areas that are without vehicle access or in areas with slope and/or environmental sensitivity that over-snow operations cannot operate. In areas with vehicle access adjacent to project sites the tree debris will be chipped and/or hauled away. No impact.

g) As proposed, project will comply with federal, state, and local statutes and regulations as they relate to solid waste. No impact.

MANDATORY FINDINGS OF SIGNIFICANCE

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal?	☐	☐	☒	☐
b) Have the potential to eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
c) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means the incremental effects of a project are considerable when viewed in connection with the effects of past projects, other current projects, and probably future projects?)	☐	☐	☒	☐
d) Have environmental effects that will cause substantial adverse effects on humans, either directly or indirectly?	☐	☒	☐	☐

DISCUSSION

a) See Environmental Assessment, section 3.4 Biological Environment.
b) See Environmental Assessment, section 3.2.1 Cultural Resources.
c) See Environmental Assessment, cumulative impacts sections.
d) See Environmental Assessment, section 3.3.5 Air Quality.

References

Aesthetics

DPR (California Department of Parks and Recreation). 1992. Sugar Pine Point State Park Preliminary Resource Element.

DPR (California Department of Parks and Recreation). 2005. Planning Milestones for the Park Units and Major Properties Associated with the California State Park System. Sacramento, CA.: Planning Division

Caltrans (California Department of Transportation), Scenic Highways Program, Information retrieved: August 29. 2006. Internet Address: http://www.dot.ca.gov/hq/LandArch/scenic_highways/scenic_hwy.htm

Agricultural Resources

United States Department of Agriculture, Natural Resource Conservation Service: Farmland Protection Policy Act. http://www.nrcs.usda.gov/programs/fppa/index.html

CDOC (California Department of Conservation) http://conservation.ca.gov/DLRP/fmmp/pubs/Order%20Form_9-20-05.pdf#search=%22farm%20mapping%20Calif%20dept%20of%20conservation%22

CDOC (California Department of Conservation) El Dorado County Williamson Acts Lands 2004: ftp://ftp.consrv.ca.gov/pub/dlrp/WA/Map%20and%20PDF/El Dorado/eld_wa_03_04.pdf

California Department of Conservation, Placer County Williamson Acts Lands 2005: ftp://ftp.consrv.ca.gov/pub/dlrp/WA/Map%20and%20PDF/Placer/placer_wa_05_06.pdf

Air Quality

California Air Resources Board, Area Designations Maps / State and National, February 2006 Internet Address: http://www.arb.ca.gov/desig/adm/adm.htm

Biological Resources

California Department of Fish and Game (DFG). 2006. California Natural Diversity Database (CNDDB). Sacramento, CA.

California Department of Fish and Game (DFG). 2006. Website: Habitat Conservation Planning Branch, California's Plants and Animals, http://www.dfg.ca.gov/hcpb/species/species.shtml

Noise

Online Congressional Research Service Report. Noise Abatement and Control: An Overview of Federal Standards and Regulations by David M. Bearden. April, 2000. Website visited May

23, 2006. http://www.ncseonline.org/NLE/CRSreports/Risk/rsk-52.cfm?&CFID=10640900&CFTOKEN=91619829

Population and Housing

TRPA (Tahoe Regional Planning Agency). 2006. Tahoe Interregional/Intraregional Transit Study.

Public Services

Payne, Graham, Supervising Water Treatment Plant Operator, Sierra District, California Department of Parks and Recreation. 8/29/06. Personal communication

John Washington, Assistant Fuels Specialist, Lake Tahoe Basin Management Unit, U.S. Forest Service. 9/13/06. Personal communication

Tahoe Truckee School District. 9/12/06. Personal communication

Recreation

DPR (California Department of Parks and Recreation). 2006. Visitor Attendance by Calendar Year, Citrix Database.

Transportation and Traffic

Tahoe Metropolitan Planning Organization. 2003. Lake Tahoe Regional Bicycle and Pedestrian Master Plan Final Report.

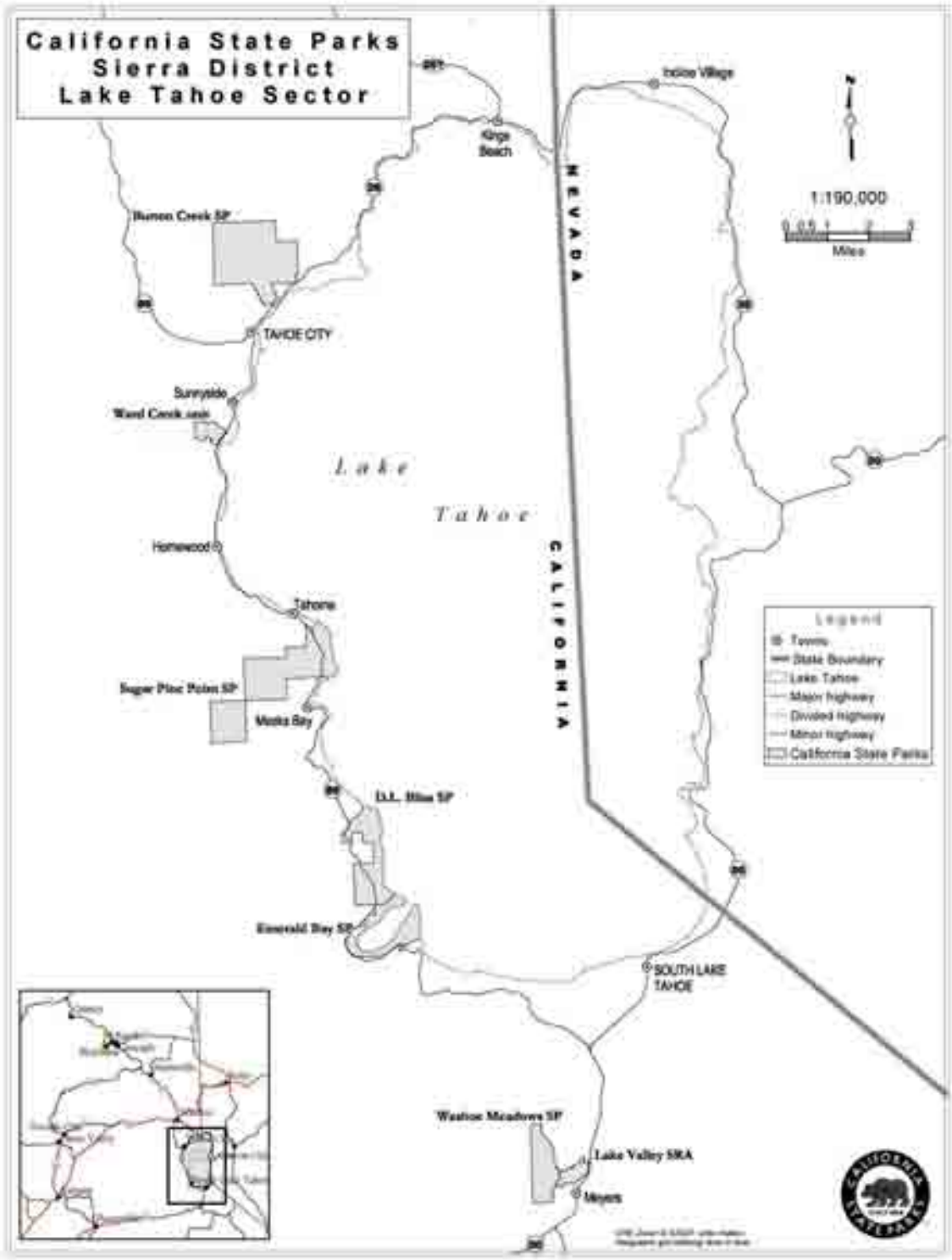
TRPA (Tahoe Regional Planning Agency). 2006. Tahoe Interregional/Intraregional Transit Study Final Report.

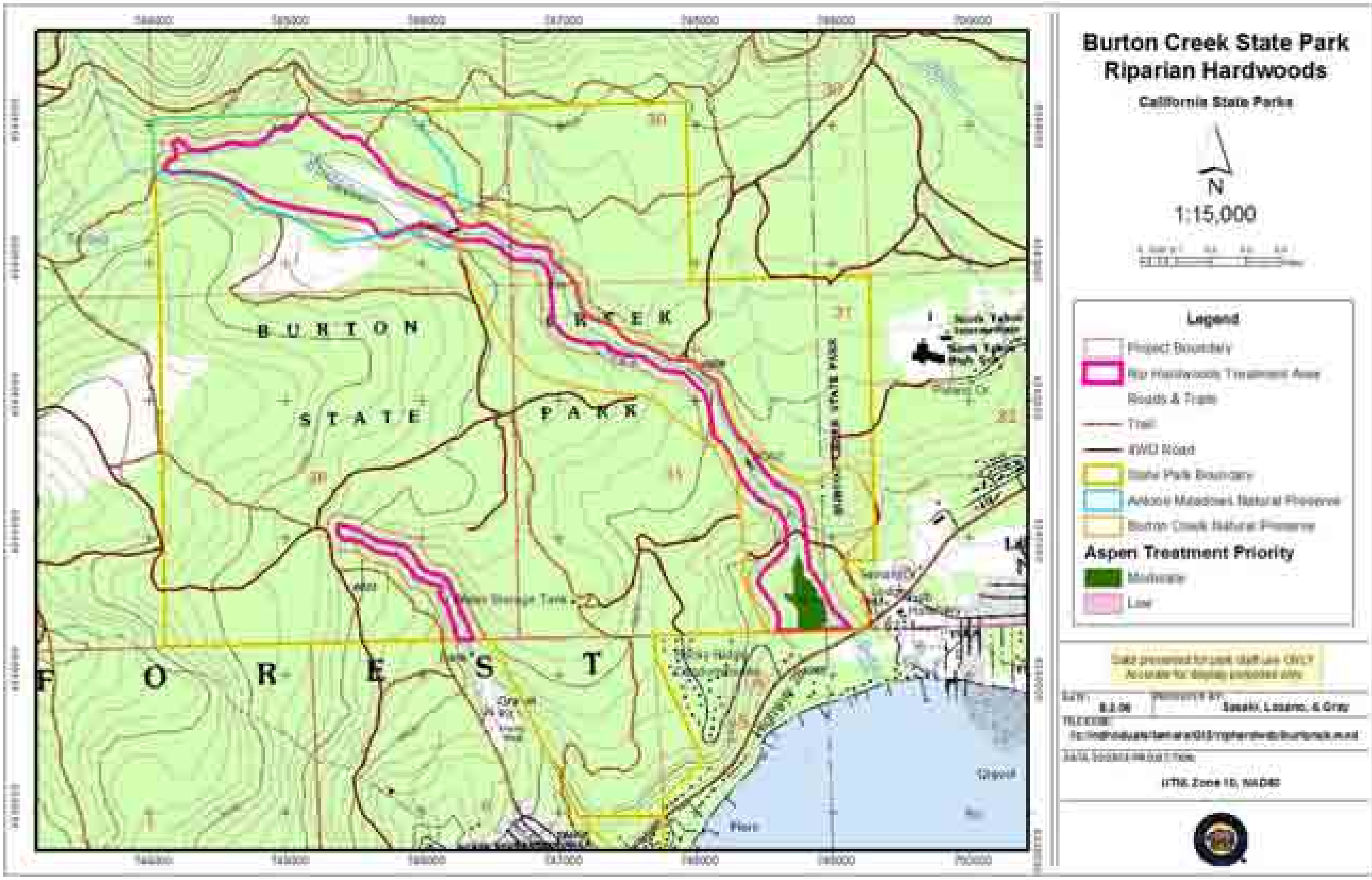
Transportation Research Board. 2000. Highway Capacity Manual.

Acronyms

BMPs	Best Management Practices
CalTrans	California Department of Transportation
CARB	California Air Resources Board
CDC	California Department of Conservation
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CTC	California Tahoe Conservancy
DFG	California Department of Fish and Game
DPR	California Department of Parks and Recreation
EA/IS	Environmental Assessment/Initial Study
EIR	Environmental Impact Report
ºF	Degrees Fahrenheit
FPPA	Farmlands Protection Policy Act
FONSI/ND	Finding of no significant impact/negative declaration
NAHC	Native American Heritage Commission
NEPA	National Environmental Protection Act
NHPA	National Historic Preservation Act
RWQCB	Regional Water Quality Control Board
SEZ	Stream Environment Zone
SMP	Smoke Management Plan
SP	State Park
TRPA	Tahoe Regional Planning Agency
TYC	Tahoe Yellow Cress
USBR	United States Bureau of Reclamation
USDI	United States Department of the Interior
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service

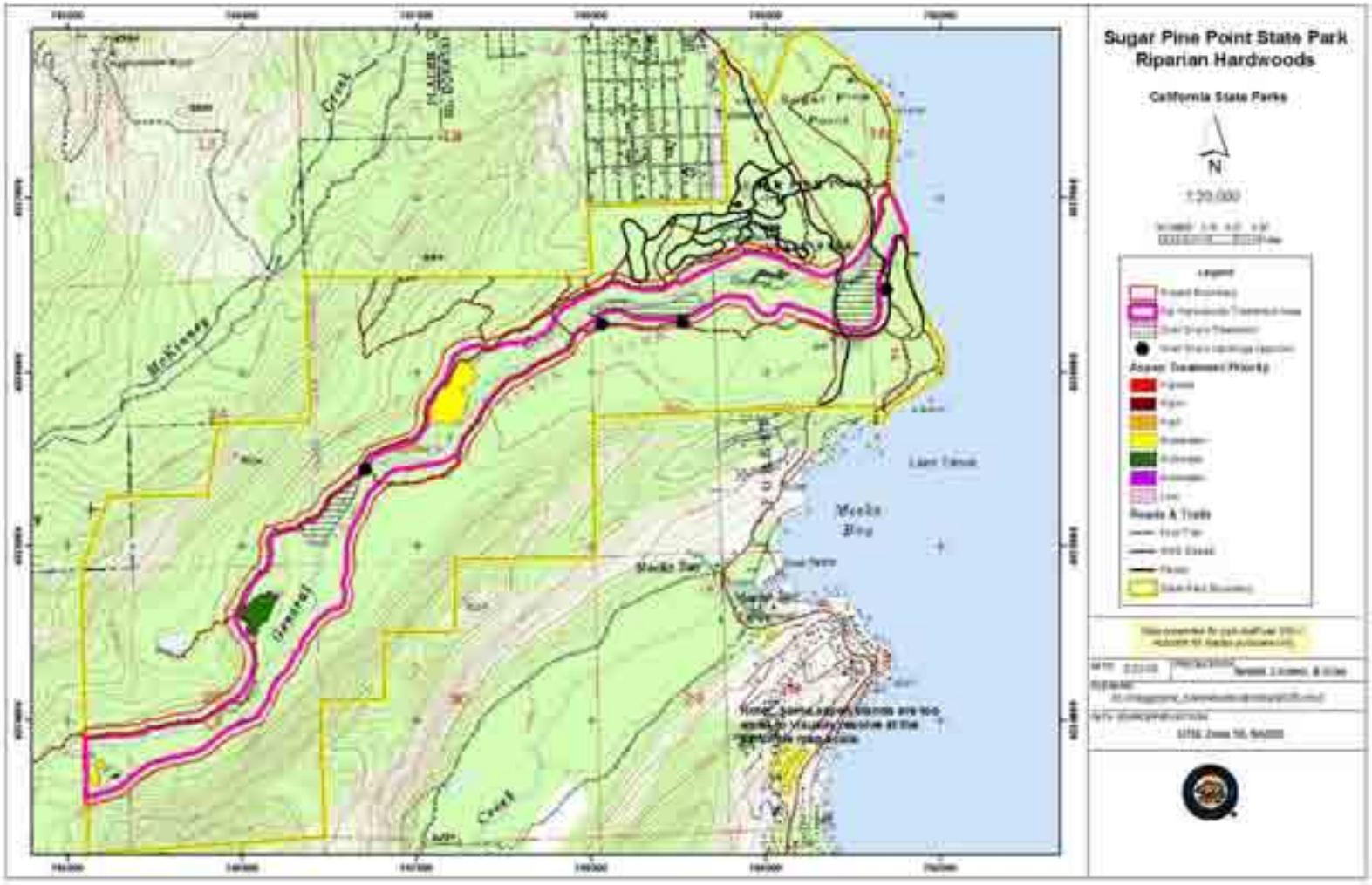
Appendix B: Maps and Graphics

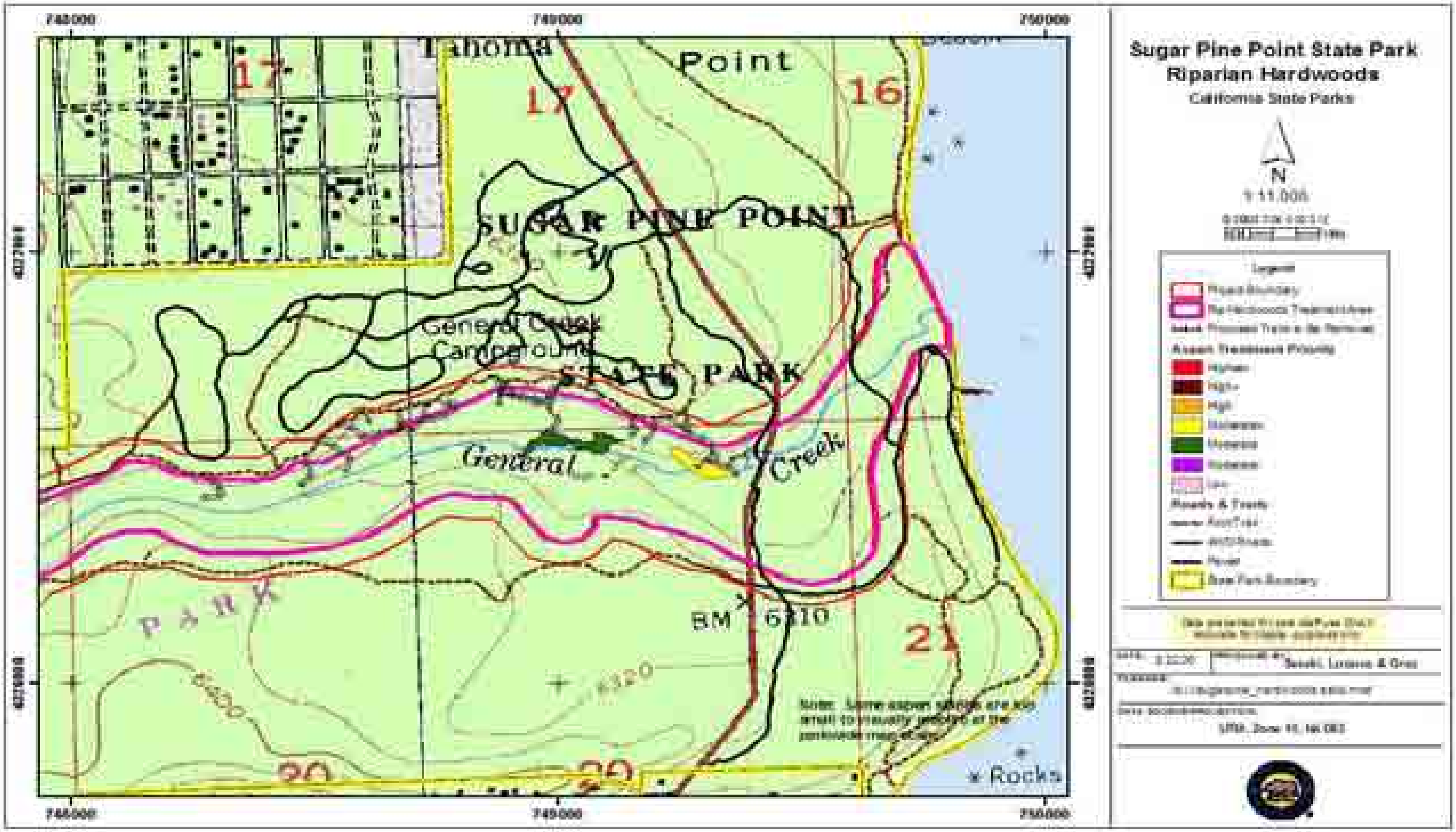

California State Parks
Sierra District
Lake Tahoe Sector
Incline Village
Kings Beach
Burton Creek SP
TAHOE CITY
Sunnyside
Ward Creek unit
Lake
Tahoe
Homewood
Tahoma
Sugar Pine Point SP
Meeks Bay
D.L. Bliss SP
Emerald Bay SP
SOUTH LAKE TAHOE
Washoe Meadows SP
Lake Valley SRA
Meyers
NEVADA
CALIFORNIA
1:190,000
0 0.5 1 2 3
Miles
Legend
Towns
State Boundary
Lake Tahoe
Major highway
Divided highway
Minor highway
California State Parks

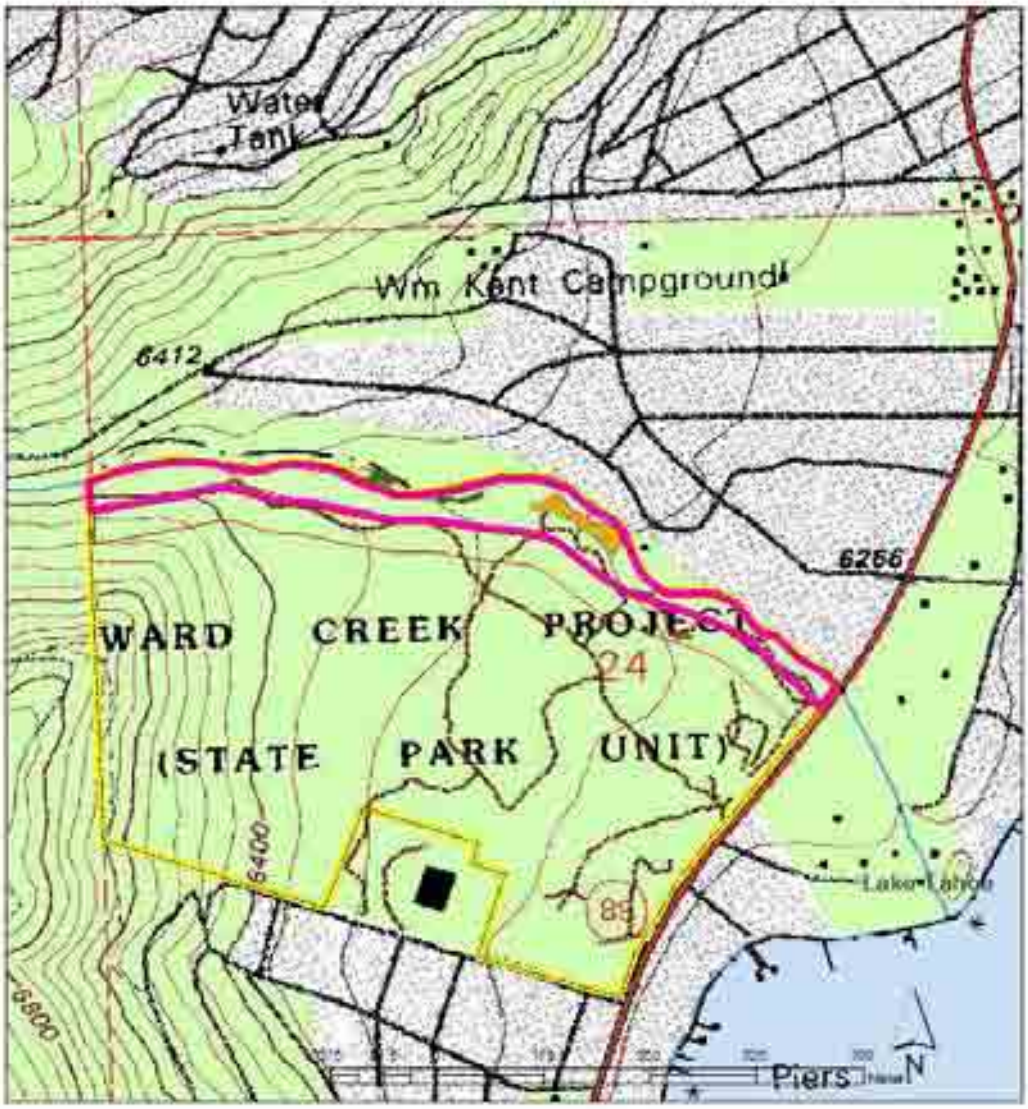


Burton Creek State Park
Riparian Hardwoods
California State Parks
N
1:15,000
Legend
Project Boundary
Roads & Trails
Trail
4WD Road
State Park Boundary
Burton Creek Natural Preserve
Aspen Treatment Priority
Moderate
Low
Sasaki, Lozano, & Gray
UTM, Zone 10, NAD83
BURTON
CREEK
STATE
PARK
F O R E S T
Water Storage Tank


D.L. Bliss State Park
Riparian Hardwoods
California State Parks
Beach Camp
Lester Beach
Calawee Cove
Rubicon Point
Paradise Flat
Lighthouse Trail
Park Residence
Group Camp
East Ridge
Balancing Rock
Rubicon Trail
Park Service Road
West Ridge
Lower Pine
USFS INHOLDING
NATIONAL FOREST
D. L. BLISS STATE PARK
Lak
BM 6295
BM 6830
1:11,500
N
Legend
Rip Hardwoods Treatment Area
Over Snow Treatment
Over Snow Landing
Project Boundary
Roads & Trails
Foot Trail
4WD Road
Paved Road
Parking Lot
State Park Boundary
USFS Property Inholding


Sugar Pine Point State Park
Riparian Hardwoods
California State Parks
N
1:20,000
Legend
Aspen Treatment Priority
Roads & Trails
McKinney
Creek
Lake Tahoe
Meeks Bay
Meeks Bay
Some aspen stands are too small to visually resolve at the particular resolution


Sugar Pine Point State Park
Riparian Hardwoods
California State Parks
N
Legend
Tahoma
Point
SUGAR PINE POINT
STATE PARK
General Creek
Campground
General
Creek
PARK
BM 6310
Rocks
748000
749000
750000



Ward Creek Unit Riparian Hardwoods

California State Parks

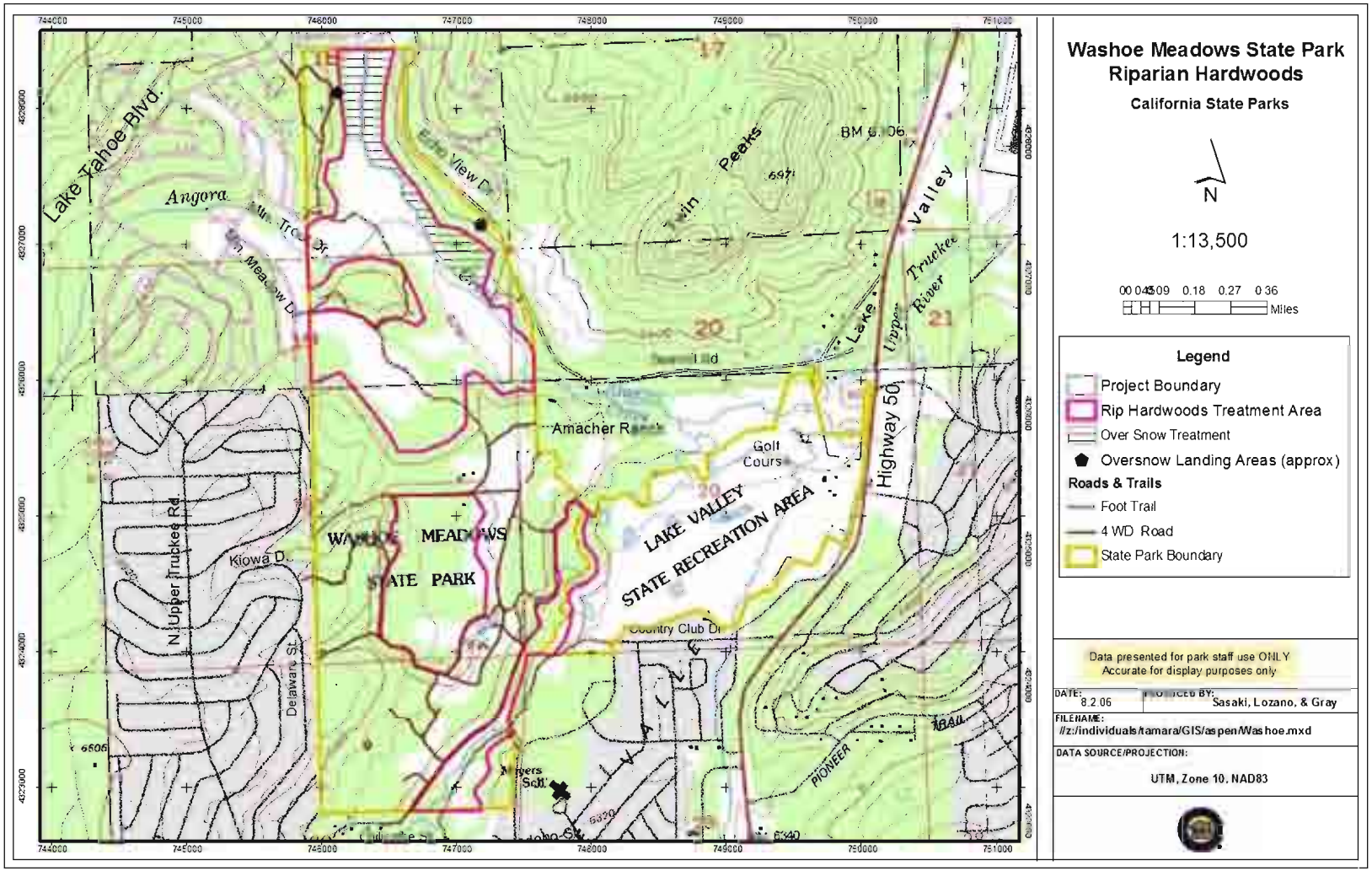
Legend

Project Boundary
Riparian/Hardwoods Treatment Area
Roads & Trails
State Park Boundary

Aspen Treatment Priority
High
Moderate
Low

Data presented for park staff use ONLY.
Accurate for display purposes only.

DATE: 7.27.06
PRODUCED BY: Sasaki, Lozano, & Gray
FILE NAME: z:/tamara/GIS/aspen/wardcrk_hardwdz.mxd
DATA SOURCE/PROJECTION: UTM, Zone 10, NAD 83


Lake Tahoe Blvd.
Angora
Elks View Dr
Twin Peaks
BM 6,906
Upper Truckee River
Lake Valley
Highway 50
Golf Course
Amacher Rd
WASHOE MEADOWS STATE PARK
LAKE VALLEY STATE RECREATION AREA
N. Upper Truckee Rd
Kiowa Dr
Delaware St
Country Club Dr
PIONEER
Washoe Meadows State Park
Riparian Hardwoods
California State Parks
N
1:13,500
0 0.045 0.09 0.18 0.27 0.36
Miles
Legend
Project Boundary
Rip Hardwoods Treatment Area
Over Snow Treatment
Oversnow Landing Areas (approx)
Roads & Trails
Foot Trail
4 WD Road
State Park Boundary
Data presented for park staff use ONLY
Accurate for display purposes only
DATE: 8.2.06
PRODUCED BY: Sasaki, Lozano, & Gray
FILENAME: //z:/individuals/tamara/GIS/aspen/Washoe.mxd
DATA SOURCE/PROJECTION:
UTM, Zone 10, NAD83

Appendix C: Abandoned Trail Obliteration and Restoration (CDPR Roads and Trails Manual, 1992)

Abandoned Trail Obliteration and Restoration

In areas where the old trail is being relocated or abandoned, time should be taken to obliterate the old trail and restore it to as natural a condition as possible. This will avoid confusion as to which trail to use, eliminate sources of erosion, restore it to a more natural appearance and help eliminate short cutting. Depending on the terrain, one may use rock, brush, fallen timber and transplant live vegetation (refer to Section 4.3 Vegetation for Restoration). It may, in some extreme cases, require constructing some type of temporary fencing to prevent use. (See Figure 20.2.)

Methods

When a section of trail is abandoned, steps shall immediately be taken to restore it. For sections that have been abandoned in the past but not restored, the Trail Coordinator should program restoration work for the earliest possible time.

Restoration work should include the following, listed in order of priority:

1. Correct the source of any problems such as source of water flowing into and down trail or travelers taking shortcuts into abandoned trail.

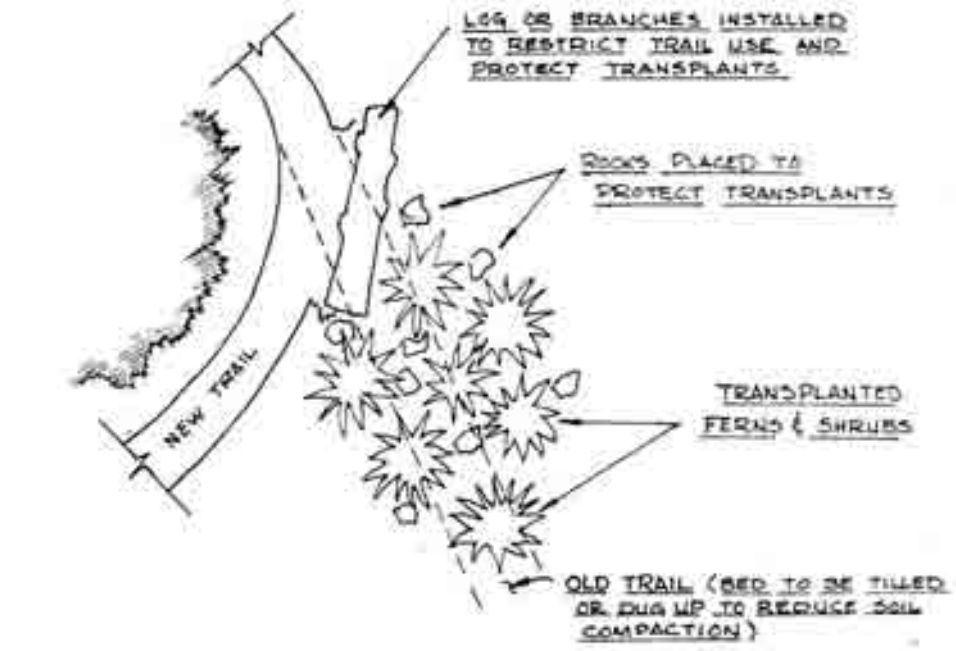
2. Where erosion has occurred, the resulting ruts and gullies must be eliminated to prevent further loss of soil. This can be accomplished by filling in these channels with local soils and gravel and returning the surface to its original shape and contour. Further stabilization may be accomplished by the placement of rocks in areas of sheet erosion or use of erosion cloth, net or other biodegradable covering agents so that the speed of water runoff is impeded and gullying and riling inhibited. Seeding should be done with native grass seed when necessary.

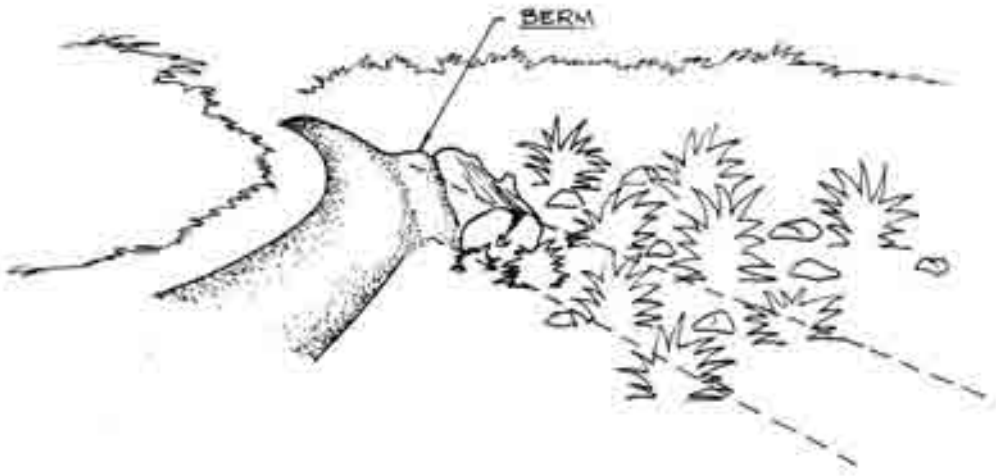
3. Where the trail was originally built on a sideslope and sidecast was used as fill for outer edge of tread, this sidecast should be pulled back into cut.

4. Once cuts and gullies have been stabilized, vegetation needs to be reestablished. Specific information on the best methods to use on an area can be obtained from the Resource Ecologist.

5. The areas being restored must be blocked from use and, if possible, from being seen. This can be accomplished by laying logs, limbs, brush and rocks on the area.

6. The trails tread surface must be scarified in order to break up the compacted soils and allow new vegetation to grow.





TYP REHAB FOR TRAIL RE-ROUTE

Appendix D: Project Cultural Resources

Table 1: Cultural resources in riparian corridor project area of: Burton Creek State Park

Resource Identification	Resource Type	Site Size	Description
CA-Pla-709/H	Historic	90 x 50 ft	Log cabin remains
CA-Pla-712/H	Historic	50 x 25 ft	Can scatter
CA-Pla-713/H	Historic	110 x 80 ft	Log cabin remains
CA-Pla-714/H	Historic	38 x 32 ft	Log cabin remains
BC90-7	Historic	23 x 17 m	Log cabin remains
Burton Creek Dam	Historic		Concrete dam
Burton Creek Ditch	Historic	1.8 mi	Earth berm and wood ditch
BCRIP 1 2006	Multicomponent	15 x 15 m	Waste flake and two tin cans
BCRIP 2 2006	Multicomponent	55 x 21 m	Lithic scatter and historic refuse
BCRIP 3 2006	Multicomponent	80 x 37 m	Lithic scatter and historic refuse
BCRIP 4 2006	Multicomponent	90 x 50 m	Lithic scatter and historic refuse
BCRIP 5 2006	Prehistoric	17 x 10 m	Lithic scatter
BCRIP 6 2006	Prehistoric	67 x 32 m	Lithic scatter
BCRIP 7 2006	Prehistoric	28 x 32	Lithic scatter
BCRIP 8 2006	Historic	18 x 15 ft	Historic refuse
BCRIP 9 2006	Multicomponent	80 x 40 ft	Lithic scatter and historic refuse
BCRIP 10 2006	Historic	45 x 28 ft	Historic refuse
BCRIP 11 2006	Historic	46 x 28 ft	Historic refuse
BCRIP 12 2006	Historic	28 x 18 ft	Historic refuse
BCRIP 13 2006	Historic	56 x 63 ft	Cabin/historic refuse
BCRIP 14 2006	Historic	60 x 40 ft	Cabin/historic refuse
BCRIP LF1	Historic		Abandoned dirt road
BCRIP LF2	Historic		Earthen ditch
BCRIP LF3	Historic		Abandoned dirt road

Table 2: Cultural resources in riparian corridor project area of: D.L. Bliss State Park

Resource Identification	Resource Type	Site Size	Description
SP-18	Historic	450 x 150 ft	CCC Camp site

Table 3: Cultural resources in riparian corridor project area of: Ed Z'berg-Sugar Pine Point State Park

Resource Identification	Resource Type	Site Size	Description
CA-Eld-510	Multicomponent	120 x 130 m	BRMs, flaked stone, historic debris
CA-Eld-547	Prehistoric	120 x 250 m	BRMs, flaked stone
"Black Point Into Lake"	Multicomponent	200 x 150 m	BRMs, flaked stone, historic debris

Resource Identification	Resource Type	Site Size	Description
“Caretaker’s Trash Dump”	Historic	70 x 80 ft	Trash scatter
Z’Berg Lithic Scatter	Prehistoric	80 x 290 m	Large lithic scatter
Guard BRM	Prehistoric	15 x 115 m	BRMs, flaked stone
Ehrman Dam, Ditch & Tank	Historic	10 ft x 1.3 mi	Water conveyance system
Erhman Picnic	Historic	150 x 115 ft	Historic debris and features
PLI 1	Prehistoric	30 x 30 m	Lithic scatter
PLI 2	Prehistoric	30 x 35 m	Lithic scatter
PLI 7	Historic	210 x 75 ft	Arborglyph grove
PLI 9	Prehistoric	32 x 100 m	Lithic Scatter
PLI 11	Prehistoric	15 x 35 m	BRM, groundstone, flaked stone
PLI 12	Prehistoric	7 x 8 m	BRM, groundstone
A1	Prehistoric	200 x 225 m	BRMs and flaked stone
A2	Multicomponent	130 x 230 m	Historic logging features, lithic scatter
A3	Prehistoric	50 x 50 m	BRM, lithic scatter
A4	Prehistoric	4 x 6 m	BRM
A5	Prehistoric	14 x 16 m	Lithic scatter
A6	Multicomponent	75 x 130 m	BRMs, flaked stone, arborglyphs
A8	Multicomponent	85 x 100 m	Lithic scatter, historic debris & linear feature
LF 1	Linear Feature		Foot trail and road segment
LF 2	Linear Feature		Fenceline
LF 3	Linear Feature		Fence posts & utility line
LF 9	Linear Feature		Fenceline
LF 11	Linear Feature		Fenceline & corral
LF 13	Linear Feature		Fenceline
LF 15	Linear Feature		Utility line
LF 9	Linear Feature		Fenceline
LF 11	Linear Feature		Fenceline & corral
LF 13	Linear Feature		Fenceline
LF 15	Linear Feature		Utility line
LF 9	Linear Feature		Fenceline
LF 11	Linear Feature		Fenceline & corral
LF 13	Linear Feature		Fenceline
LF 15	Linear Feature		Utility line

Table 4: Cultural resources in riparian corridor project area of: Ward Creek Unit

Resource Identification	Resource Type	Site Size	Description
CA-Pla-707	Prehistoric	4 x 5 m	Groundstone and lithic scatter
CA-Pla-708H	Historic	50 x 35 ft	Collapsed log cabin

Table 5: Cultural resources in riparian corridor project area of: Washoe Meadows State Park

Resource Identification	Resource Type	Site Size	Description
CA-Eld-530H	Historic	350 x 200 ft	Historic features & scatter
CA-Eld-531	Prehistoric	50 x 55 m	BRM & lithic scatter
CA-Eld-532	Prehistoric	17 x 13 m	Bedrock milling features
CA-Eld-539	Multicomponent	60 x 20 m	Groundstone & lithic scatter
CA-Eld-553	Multicomponent	135 x 140 m	BRM & historic scatter
CA-Eld-554	Prehistoric	25 x 15 m	BRM & lithic scatter
CA-Eld-556H	Historic	0.6 mi x 8 ft	Water conveyance system
CA-Eld-1841H	Historic	18 x 10 ft	Deteriorated spring house
CA-Eld-2152	Prehistoric	45 x 15 m	Lithic scatter
CA-Eld-2153H	Historic	325 x 175 ft	Large historic scatter
CA-Eld-2156	Prehistoric	100 x 20 m	Lithic scatter
CA-Eld-2158	Prehistoric	215 x 120 m	Lithic scatter
CA-Eld-2159	Prehistoric	28 x 18 m	Lithic scatter
CA-Eld-2160	Prehistoric	35 x 17 m	Lithic scatter
CA-Eld-2162	Prehistoric	65 x 60 m	Lithic scatter
P-9-3271-H	Historic	0.3 mi	Earthen ditch
P-9-3272-H	Historic	550 ft	Earthen ditch
P-9-3273-H	Historic	700 ft	Raised dirt road
P-9-3274-H	Historic	1,000 ft	Earthen dirt road

Appendix E: Project Soil Types and Descriptions

Soils Types by State Park Unit Table

Park Unit	Acronym	Soil Series Mapping Unit	Erosion Hazard
Burton Creek State Park	JhC	Jabu stony sandy loam, moderately fine subsoil variant, 2-9% slopes	slight
	JwD	Jorge-Tahoma very stony sandy loams, 2-15% slopes	slight
	JwE	Jorge-Tahoma very stony sandy loams, 15-30% slopes	moderate
	JwF	Jorge-Tahoma very stony sandy loams, 30-50% slopes	high
	Lo	Loamy Alluvial Land	slight
	Mh	Marsh	not rated
	Ra	Rock land	moderate
	Rx	Rock outcrop and rubble land	slight
	TaD	Tahoma stony sandy loam, 2-15% slopes	slight
	TbD	Tahoma very stony sandy loam, 2-15% slopes	slight
	UmE	Umpa very stony sandy loam, 15-30% slopes	moderate
D.L. Bliss State Park	CaE	Cagwin-Rock outcrop complex, 15-30% slopes	high
	RtF	Rock outcrop-Toem complex, 30-50% slopes	high
Ed Z'berg-Sugar Pine Point State Park	Gr	Gravelly Alluvial Land, 0-5% slopes	slight
	MsD	Meeks very stony loamy coarse sand, 5-15% slopes	moderate
	TcB	Tallac gravelly course sand loam, seeped, 0-5% slopes	slight
	TdD	Tallac stony course sandy loam, 5-15% slopes	slight
	TeE	Tallac very stony course sand loam,15-30% slopes	moderate
	TeG	Tallac very stony course sand loam, 30-60% slopes	high
Ward Creek Unit	TkC	Tallac stony course sandy loam, seeped, 2-9% slopes	slight

Park Unit	Acronym	Soil Series Mapping Unit	Erosion Hazard
	TcC	Tallac gravelly coarse sandy loam, seeped 5-9%	slight
	WcF	Waca-Rock outcrop complex, 30-50% slopes	high
Washoe Meadows State Park	CaD	Cagwin-Rock outcrop complex, 5-15% slopes	moderate
	Co	Celio gravelly loamy coarse sand	slight
	JaC	Jabu coarse sandy loam, 0-9% slopes	slight
	Lo	Loamy Alluvial Land	slight
	Mh	Marsh	not rated
	MkB	Meeks gravelly loamy coarse sand, 0-5% slopes	slight
	MkD	Meeks gravelly loamy coarse sand, 5-15% slopes	moderate
	Px	Pits and dumps	not rated
	Ra	Rock land	moderate

The following are descriptions of the soils from the Tahoe Basin Area, California and Nevada soil survey (NRCS 1974):

CaD: Cagwin-Rock outcrop complex, 5-15% slopes

This complex consists of rolling soils on foot slopes along the fringe of the granitic uplands. It is about 85-95% soil material and 5-15% granitic outcrop. The soil material is about 65% Cagwin soil; 5% Toem coarse sand; and about 30% a soil that is similar to the Cagwin soil, but has thick, dark-colored surface layer and is deeper than 40 inches over weathered granitic rock. Along the contact with the glacial outwash deposits are scattered inclusions of Inville gravelly coarse sandy loam, Jabu coarse sandy loam, and Jabu coarse sandy loam, shallow variant. Runoff is slow in undisturbed areas of the Cagwin soil and medium in disturbed areas. The erosion hazard is only slight. This complex is used for timber production and urban development.

CaE: Cagwin-Rock outcrop complex, 15-30% slopes

This complex consists of hilly soils on granitic uplands. It is about 75-95% soil material and 5-25% granitic outcrop. The soil material is about 70% Cagwin soil; 5% Toem coarse sand; and about 25% a soil that is similar to the Cagwin soil, but has thick, dark-colored surface layer and is deeper than 40 inches over weathered granitic rock. The surface layer of the Cagwin soil does not absorb water readily. In disturbed areas, run off is rapid and the erosion hazard is high. This complex is used for watershed, timber, and recreation.

Co: Celio gravelly loamy coarse sand

This nearly level and gently sloping soil is on glacial outwash and in areas where scarps of outwash border creekbeds. It has the profile described as representative of the series. About 6% of the total acreage of this soil is Meeks gravelly loamy coarse sand, in areas adjacent to the Upper Truckee River; 4% is Marsh, in depressional areas in the Lake Valley area where drainage is very poor and the soil material is organic; and 4% is Elmira loamy coarse sand, wet variant, in old eroded areas near Meeks Creek that have been filled with recent, coarse-textured alluvium. Runoff on this Celio soil is slow, and the erosion hazard is slight. The hazard of deposition of soil and other debris from surrounding areas is moderate. The principal uses of this soil are recreation and housing.

Gr: Gravelly Alluvial Land, 0-5% slopes

Gravelly alluvial land consists of small areas of recent gravelly alluvium adjacent to stream channels and in meadows. Slopes are 0-5%. The vegetation consists of meadow grasses and sedges and scattered stands of lodgepole pine. This land is more than 60 inches deep. It varies in color. It is stratified gravelly sandy loam, gravelly loam, and gravelly silt loam that generally becomes very gravelly with increasing depth. In places the surface is covered with 1-6 inches of peat. Gravelly alluvial land is somewhat poorly drained to poorly drained. Permeability is moderate. Runoff is very slow, and the erosion hazard is slight. Some areas are flooded in spring during periods of runoff. A seasonal high water table is at a depth of 12-24 inches. The available water capacity is 4-6 inches. This land is used for grazing and urban development.

JaC: Jabu coarse sandy loam, 0-9% slopes

This soil is on glacial outwash terraces. It has a profile similar to the one described as representative of the series, but the surface layer is 8-20 inches thick and in some areas the fragipan is underlain by lake-laid sediments. About 5% of the acreage of this soil is Jabu coarse sandy loam, shallow variant; about 5% is Elmira gravelly loamy coarse sand; about 2% is Elmira-Gefo loamy coarse sands; and 10% is a soil that is similar to this Jabu soil, but does not have a fragipan. This Jabu soil is well drained. Even in areas of bare of vegetation, surface runoff is slow and the erosion hazard is only slight to moderate. Roots can penetrate to a depth of 40-60 inches or more. Available water capacity is 4-5.5 inches. This soil is used primarily for limited grazing and timber.

JhC: Jabu stony sandy loam, moderately fine subsoil variant, 2-9% slopes

This soil is on alluvial fans that extend from Tahoe City to Kings Beach. The alluvium is from andesitic sources. The profile of this soil is the one described as representative of the variant. About 5 percent of the acreage is a soil along drainages that is similar to this Jabu soil, but is very deep and its subsoil is more than 50 percent coarse fragments; about 5 percent is a stone-free soil; about 2 percent along the contact with the upland soils is either Tahoma stony sandy loam or Jorge very stony sandy loam; and about 5 percent near the lake shore is a soil that is similar to this Jabu soil, but is moderately deep over a silica-cemented pan and is underlain by gravelly alluvium. This Jabu soil is well drained. In spring during the period of runoff, there is some lateral

movement of water along the contact between the subsoil and the lake sediment. Even if this soil is bare of vegetation, surface runoff is slow and the erosion hazard is only slight. Roots can penetrate to a depth of 23 to 44 inches. Available water capacity is 3 to 5 inches. This soil is used chiefly for homesites and timber.

JwD: Jorge-Tahoma very stony sandy loams, 2-15% slopes

These soils are on volcanic flows in the northern part of the survey area. The Jorge soil makes up about 45 percent of the mapping unit, and the Tahoma soil about 40 percent. Fugawee very stony sandy loam, Umpa very stony sandy loam, and a soil in the Kings Beach area, similar to the Jorge soil, but alluvial in origin, makes up the other 15 percent. The Tahoma soil is described under the heading "Tahoma Series." I has a profile similar to the one described as representative of the series, but 5 to 15 percent of the surface area is covered with cobblestones and boulders. The Jorge soil is well drained and has moderate subsoil permeability. If it is bare of vegetation, runoff is slow to medium and the erosion hazard is only slight. Roots can penetrate to a depth of more than 60 inches. Available water capacity is 3 to 5 inches. The Tahoma soil is well drained and had moderate subsoil permeability. Runoff is slow to medium, and the erosion hazard is slight. Roots can penetrate to a depth of more that 60 inches, and in available water capacity is 4.5 to 6.5 inches. These soils are used for timber and homesites.

JwE: Jorge-Tahoma very stony sandy loams, 15-30% slopes

These soils are on the volcanic flows in the northern part of the survey area. The Jorge soil makes up about 50 percent of the unit. It occupies the steeper, convex parts of the landscape. The Tahoma soil makes us about 35 percent of the unit. It occupies the slightly concave bench positions. About 15 percent of the unit is Umpa very stony sandy loam, Fugawee very stony sandy loam, Stony colluvial land, Rock land, and Rock outcrop and Rubble land. The Jorge soil has the profile described as representative of the Jorge series. The Tahoma soil has a profile similar to the one describe as representative of the Tahoma series, but cobblestones, stones, and rock outcrops cover 5 to 15 percent of the surface area. The Jorge soil is well drained and has moderate subsoil permeability. If it is bare of vegetation, runoff is medium and the erosion hazard is moderate. Roots can penetrate to a depth of more than 60 inches. Available water capacity is 3 to 5 inches. The Tahoma soil is well drained and has moderate subsoil permeability. Runoff is medium, and the erosion hazard is moderate. Roots can penetrate to a depth of 43 to more that 60 inches, and the available water capacity is 4.5 to 6.5 inches. These soils are used for timber and homesites.

JwF: Jorge-Tahoma very stony sandy loams, 30-50% slopes

These soils are on volcanic mountains in the northern part of the survey area. The Jorge soil makes up about 60 percent of the unit, and the Tahoma soil about 30 percent. The remaining 10 percent is Umpa very stony sandy loam, Stony colluvial land, Rock land, and Rock outcrop and Rubble land. The Tahoma soil has a profile similar to the one described as representative of the series, but rocks, stones, and boulders cover 5 to 15 percent of the surface area. The Jorge soil is well drained and

has moderate subsoil permeability. If it is bare of vegetation, runoff is rabid and the erosion hazard is high. Roots can penetrate to a depth of more than 60 inches. Available water capacity is 3 to 5 inches. Inherent fertility is moderate. The Tahoma soil is well drained and has moderate subsoil permeability. Runoff is rapid, and the erosion hazard is high. Roots can penetrate to a depth of 43 to more that 60 inches, and the available water capacity is 4.5 to 6.5 inches. These soils are used for timber and watershed

Lo: Loamy Alluvial Land

Loamy alluvial land (Lo) consists of small areas of recent alluvium adjacent to stream channels and in meadows. It is nearly level to gently sloping. The vegetation is sedges, meadow grasses, and scattered lodgepole pine. The surface layer is dark grayish-brown to dark-brown, slightly acid to medium acid sandy loam to silt loam. In places it is covered with 1 inch to 6 inches of peat. Below this is stratified, mottled sandy loam to silty clay loam. The substratum, at a depth of more that 48 inches, is gravel, lake sediment, or loamy alluvium. Loamy alluvial land is somewhat poorly drained to poorly drained. Permeability and the available water capacity vary. Runoff is very slow, and the erosion hazard is slight. Flooding is a hazard in spring during periods of runoff. The seasonal high water table is at a depth of 12 to 24 inches. Included in mapping are scattered areas of Gravelly alluvial land and Marsh. Loamy alluvial land is used for grazing and urban development.

Mh: Marsh

Marsh (Mh) is in the Upper Truckee Marsh and in very poorly drained and ponded meadows. It is mostly nearly level. The vegetation is reeds, sedges, and tules in the ponded areas and sedges, meadow grasses, and scattered thickets of willow and lodgepole pine in the very poorly drained area. Most of the acreage is under water for at least 10 months of the year. In the very poorly drained area, the surface is covered with about 6 to 8 inches of reddish-brown peat. Below this is about 6 to 10 inches of black peat, which is underlain by black muck. The substratum, at a depth of 30 to 60 inches, is gleyed sand and gravel. Permeability varies. Runoff is ponded, and the erosion hazard is slight. Included in mapping are scattered areas of Elmira soils, vet variant and Loamy alluvial land. Marsh is used for recreation, wildlife, and limited grazing. Some areas are being filled and used for homesites (pl. IV, top).

MkB: Meeks gravelly loamy coarse sand, 0-5% slopes

This soil is on glacial outwash. The surface layer is 14 to 19 inches thick; less that 1 percent of the surface area is covered with cobblestones, stones, and boulders; and the coarse fragment in the underlying horizons consist dominantly of gravel and cobblestones and a few stones and boulders. Otherwise, this soil has a profile similar to the one described as representative of the series. About 6 percent of the acreage of this soil is Gefo gravelly loamy coarse sand, most of which is southwest of the intersection of U.S. Highway 50 and California Highway 89/ about 6 percent is Celio gravelly loamy coarse sand, adjacent to the Upper Truckee River; and about 3 percent is Gravelly alluvial land, near Meyers. Also, scattered throughout are small areas where

1 to 5 percent of the surface area of the Meeks soil is covered with stones. Runoff is slow on this Meeks soil. The erosion hazard is slight. The available water capacity is 1.5 to 2.5 inches, depending on depth to the weakly silica cemented hardpan. Water is perched on the pan of a short period in spring during the period of snowmelt. The effective depth is 41 to 70 inches. The principal use of this soil is for housing.

MkD: Meeks gravelly loamy coarse sand, 5-15% slopes

This soil is on scarps of dissected glacial outwash. The surface layer is about 15 inches thick, and less than 1 percent of the surface area is covered with cobblestones, stones, and boulders. Otherwise, this soil has a profile similar to the one described as representative of the series. About 7 percent of the total acreage of this soil is Jabu sandy loam, seeped, at the upper limit of the scarps west of the Upper Truckee road; 7 percent it Celio gravelly loamy coarse sand, at the bottom of scarps on the east side of the Lake Valley; and about 5 percent is Meeks very stony loamy coarse sand. Runoff is medium in the strongly sloping areas of this Meeks soil. Seeps occur where road cuts and other disturbances expose the downslope movement of water on the weakly silica cemented hardpan. The erosion hazard is ordinarily slight, but is moderate in disturbed, strongly areas under construction. Available water capacity is 1.5 to 2.5 inches. The depth to the weakly silica cemented substratum is 41 to 68 inches. The principal uses of this soil are timber and housing.

MsD: Meeks very stony loamy coarse sand, 5-15% slopes

This soil is on lateral moraines and ground moraines. It has a profile similar to the one described as representative of the series, but the substratum is strongly cemented with silica and is continuous. About 10 percent of the acreage of this soil is a Meeks soil, mostly west of the Upper Truckee River and west of Meyers, but only 1 to 5 percent of its surface area is covered with stones; about 2 percent is Gefo gravelly loamy coarse sand, adjacent to creek banks and washes; 3 percent is Jabu coarse sandy loam, seeped, in scarp areas of old moraines on the west side of Lake Valley; 5 percent is Tallac stony coarse sandy loam, adjacent to the transition zone where metabasic lateral moraine debris is bermed over ridgetops, as in the area one-half mile north-east of Angora Lookout; and about 5 percent is a moderately steep Meeks very stony loamy coarse sand, adjacent to the strongly sloping areas. Runoff is slow on the Meeks soil. The erosions hazard is ordinarily slight. IN highway cuts and under housing pads in strongly sloping areas, however, the erosion hazard is moderate. During spring thaw in the strongly sloping areas, seeps form in road cuts and disturbed areas become the melt water penetrates the soil to the strongly silica cemented substratum and then moves laterally to the exposed areas, resulting in small slips and slides. Available water capacity is 1.5 to 2.5 inches. Because this soil occupies the foot slopes of steeper Meeks soils, the downslope movement of water on the hardpan keeps the profile recharged during dry periods. Depth to the silica hardpan is 41 to 68 inches. The principal uses of this soil are timber, watershed, and home sites.

Px: Pits and dumps

Pits and dumps (Px) consists of sand and gravel pits, refuse dumps, and rock quarries. These areas are typically barren and vary in natural drainage, permeability, erosion, hazard, runoff, and available water capacity.

Ra: Rock land

Rock land (Ra) is in areas of granitic, metamorphic, and volcanic rocks. Large areas at the higher elevations in the southwestern part of the survey area are the result of glaciation. This land is undulating to very steep. Slopes are 5 to 75 percent. The vegetation consists of open stands of mountain shrubs and scattered conifers. In granitic areas, Rock land is associated with Cagwin, Graylock and Toem soils and in metamorphic and volcanic areas, with Fugawee, Jorge, Tahoma, Umpa, and Waca soils. Rock outcrop and stones cover 50 to 90 percent of the surface area. In the crevices is a thin mantle of soil material generally less than 10 inches deep. Drainage is excessive, runoff is rapid, and the erosion hazard is slight. The available water capacity is less than 1 inch. Included in mapping are scattered areas of Cagwin, Fugawee, Graylock, Jorge, Tahoma, Umpa, and Waca soils, and Rock outcrop and Rubble land. Rock land is used for watershed and wildlife.

RtF: Rock outcrop-Toem complex, 30-50% slopes

This complex is on granitic uplands, mainly in the southern and eastern parts of the survey area. It is about 25 to 50 percent granitic rock outcrop and 50 to 75 percent soils. About 85 percent of the acreage of soils is a Toem soil, and 15 percent is Cagwin loamy coarse sand. The Toem soil is excessively drained. Runoff is rapid, and the erosion hazard is high. The available water capacity is 0.5 to 1 inch. This complex is used for watershed, wildlife, and recreation. Toem soil is excessively drained. Runoff is rapid, and the erosion hazard is high. The available water capacity is 0.5 to 1 inch. This complex is used for watershed, wildlife, and recreation.

Rx: Rock outcrop and rubble land

This mapping unit is in areas of granitic, metamorphic, and volcanic rock. At the higher elevations in the southwestern part of the survey, it is the result of glaciation. In other areas, it is mostly volcanic plugs and vents and the associated talus slopes. It ranges from moderately sloping to very steep. There is little or no vegetation. In granitic areas Rock outcrop and Rubble land is associated with Graylock, Toem and Meeks soils, and in metamorphic or volcanic areas, with Jorge, Tallac, Umpa, and Waca soils. Rock outcrop consists of areas of rock left bare by the scouring of glaciers or of large bare faces of hard metamorphic or volcanic rock. There is little or no soil material in the crevices. Runoff is very rapid. Rubble land consists of stony colluvium on the toe slopes of glaciated areas, stony colluvium from glacial deposits, or moraines, and stony colluvium below volcanic plugs or vents. It is more than 90 percent stones and boulders. Below a depth of 40 inches in some moraine areas is a cemented pan of compact till. Rubble land is excessively drained. Runoff is slow, and the erosion hazard is slight. Included in mapping are scattered areas of Meeks, Tome, and Waca

soils; areas of Tallac soils, shallow variant; and areas of Rock land and Stony colluvial land. Rock outcrop and Rubble land is used for watershed.

TcB: Tallac gravelly course sand loam, seeped, 0-5% slopes
This soil is on glacial outwash deposits. About 10 percent of the acreage of this soil is a moderately sloping Tallac gravelly coarse sandy loam, seeped; 5 percent is Meeks stony loamy coarse sand; and 5 percent is Gravelly alluvial land. This Tallac soil is moderately well drained. The surface layer does not absorb water readily. Runoff is slow, and the erosion hazard is slight. Water accumulates above the weakly silica cemented pan in spring during the period of snowmelt. This soil is used for timber, watershed, recreation, and urban development.

TcC: Tallac gravelly coarse sandy loam, seeped 5-9%
This soil is on glacial outwash deposits. It has the profile described as representative of the series. About 10 percent of the acreage of this soil is a gently sloping Tallac gravelly sandy loam, seeped and 5 percent is Meeks stony loamy coarse sand. This Tallac soil is moderately well drained. The surface layer does not absorb water readily. Runoff is slow to medium, and the erosion hazard is slight. Water accumulated about the weakly silica cemented pan in spring during the period of snowmelt. This soil is used for timber, watershed, recreation, and urban development.

TdD: Tallac stony course sandy loam, 5-15% slopes
This soil is on moraines (pl. III, right). Stones cover 1 to 5 percent of the surface area, and the surface layer is 13 to 17 inches thick. Otherwise, the profile of this soil is similar to the one described as representative of the series. About 10 percent of the acreage of this soil is Tallac gravelly coarse sandy loam, seeped; 10 percent is areas where 5 to 15 percent of the surface area is covered with stones; and 5 percent is Meeks very stony loamy coarse sand. In the High Meadows and Fountain Place area, the parent material of this soil is mainly granitic. In the area north of Ward Creek, this soil has been water modified at elevations less than 6,800 feet. This Tallac soil is well drained. The surface layer does not absorb water readily. Runoff is slow to medium, and the erosion hazard is slight to moderate. Water accumulates on top of the weakly silica cemented pan for a short period in spring during snowmelt. This soil is used for timber, watershed, recreation, and urban development.

TeE: Tallac very stony course sand loam, 15-30% slopes
This moderately steep soil is on glacial moraines. Stones cover 5 to 15 percent of the surface area, and the surface layer is 10 to 15 inches thick. Otherwise, the profile of this soil is similar to the one described as representative of the series. About 15 percent of the acreage of this soil is a Tallac soil that has only 1 to 5 percent of its surface area covered with stones, and 5percent is Meeks very stony loamy coarse sand. In the High meadows area the parent material of this soil is mainly granitic. This Tallac soil is well drained. The surface layer does not absorb water readily. Runoff is medium, and the erosion hazard is moderate. This soil is used for timber, watershed, recreation, and urban development.

TeG: Tallac very stony course sand loam, 30-60% slopes

This soil is on lateral moraines. Stones cover 5 to 15 percent of the surface area, and the surface layer is 10 to 15 inches thick. Otherwise, the profile of this soil is similar to the one described as representative of the series. About 10 percent of the acreage is a soil that is similar to this soil, but does not have a silica cemented pan in the substratum; 10 percent consists of areas where 1 to 5 percent of the surface areas is covered with stones; and about 5 percent is Meeks very stony loamy coarse sand. Also included in mapping are areas of less steep soils on narrow ridgetops or benches on the sides of the moraines. This Tallac soil is well drained. The surface layer does not absorb water readily. Runoff is rapid, and the erosion hazard is high. This soil is used for timber, watershed, and recreation.

TkC: Tallac stony course sandy loam, seeped, 2-9% slopes

This soil on glacial outwash deposits, mostly in the Blackwood Canyon and Ward Creek areas. Stones cover 5 to 15 percent of the surface area. Otherwise, this soil has a profile similar to the one described as representative of the series. About 10 percent of the acreage is Tallac gravelly coarse sandy loam, and 5 percent is Tallac stony coarse sandy loam. This Tallac soil is moderately well drained. The surface layer does not absorb water readily. Runoff is slow to medium, and the erosion hazard is slight. Water accumulates above the weakly silica cemented pan in the spring during the period of snowmelt. This soil is used for timber and homesites.

WcF: Waca-Rock outcrop complex, 30-50% slopes

This complex is on volcanic uplands. It is about 75 to 90 percent soil material and 10 to 25 percent volcanic rock outcrop. The soil material is about 75 percent Waca cobbly coarse sandy loam that in some areas has slopes of 50 to 70 percent and in other areas, slopes of 9 to 30 percent; about 20 percent is Meiss cobbly loam; and 5 percent is Tallac very stony coarse sandy loam. The Waca soil is well drained. If it is bare of vegetation, surface runoff is rapid and the erosion hazard is high. Depth to rock is 20 to 40 inches. Rock outcrop consists of hard andesitic breccia. The outcrops range from scattered rock 1 to 2 feet in diameter to large expanses covering 50 to 500 square feet. Runoff is very rapid, and the erosion hazard is slight. This complex is used for watershed, recreation, and timber.

UmE: Umpa very stony sandy loam, 15-30% slopes

This moderately steep or hilly soil is on uplands in the Mount Watson-Mount Pluto area. About 5 percent is a soil similar to this Umpa soil, but has only a slight clay increase in the subsoil and does not contain a large number of coarse fragments; and 10 percent is Jorge-Tahoma very stony sandy loams. Also, included in mapping, along the contact with granitic rock on the Nevada side of the Lake, are scattered areas of soil similar to this Umpa soil that is underlain by granitic rock. If this Umpa soil is bare of vegetation, surface runoff is medium and the erosion hazard is moderate. This soil is used for timber.

Appendix F: Tahoe Regional Planning Agency (TRPA) Noise Event Standards

SINGLE NOISE EVENTS
Threshold – Dba
(Amended 7/23/03)

Source	Overall	Less Than 35 MPH	Greater Than 35 MPH	Monitoring Distances
Aircraft	80[1]	--	--	6,500 m-start of takeoff roll 2,000 m-runway threshold approach
	77.1[2]	--	--	6,500 m-start of takeoff roll 2,000 m-runway threshold approach
Watercraft[3]				
1. Pass-By Test	82 L_{max}	--	--	50 ft.-engine at 3,000 rpm
2. Shoreline Test	75 L_{max}	--	--	Microphone 5 ft. above water, 2 ft., above curve of shore, dock or platform. Watercraft in Lake, no minimum distance.
3. Stationary Test	88 dBA L_{max} for boats manufactured before January 1, 1993	--	--	Microphone 3.3 feet from exhaust outlet - 5 feet above water.
	90 dBA L_{max} for boats manufactured after January 1, 1993	--	--	
Motor Vehicles Less Than 6,000 GVW	--	76	82	50 ft.
Motor Vehicles Greater Than 6,000	--	82	86	50 ft.
Motorcycles	--	77	86	50 ft.
Off-Road Vehicles	--	72	86	50 ft.
Snowmobiles	--	82	--	50 ft.

1. The single event noise standard of 80 dBA L_{max} for aircraft departures at Lake Tahoe Airport shall be effective immediately. The single event noise standard of 80 dBA L_{max} for aircraft arrivals at Lake Tahoe Airport is not to be effective until ten years after the adoption of an airport master plan by TRPA. The schedule for phasing in the 80 dBA arrival standard shall be based on a review and consideration of the relevant factors, including best available technology and environmental concerns, and shall maximize the reduction in noise impacts caused by aircraft arrivals while allowing for the continuation of general aviation and commercial service. The beginning arrival standard shall not exceed 84 dBA for general aviation and commuter aircraft, and 86 dBA for transport category aircraft.
2. Between the hours of 8 p.m. and 8 a.m.
3. Failure to meet any one of these three test standards exceeds the single noise event threshold for watercraft.

Source: TRPA Goals and Policies (adopted 1986)

CUMULATIVE NOISE EVENTS

Amended 5/28/97

Land Use Category	Average Noise Level Or CNEL range (dBA)
NUMERICAL STANDARDS: Background noise levels shall not exceed the following levels:	
High Density Residential Areas	50
Low Density Residential Areas	50
Hotel/Motel Areas	60
Commercial Areas	60
Industrial Areas	65
Urban Outdoor Recreation Areas	55
Rural Outdoor Recreation Areas	50
Wilderness and Roadless Areas	45
Critical Wildlife Habitat Areas	45
POLICY STATEMENT: It shall be a policy of the TRPA Governing Board in the development of the Regional Plan to define, locate, and establish CNEL levels for transportation corridors.	
TRANSPORTATION CORRIDORS[1]	
Highway 50	65[2]
Highways 89, 207, 28, 267 and 431	55[2]
South Lake Tahoe Airport	60[3]

1. Recommended CNEL levels for transportation corridors.
2. This recommended threshold overrides the land use CNEL thresholds and is limited to an area within 300 feet from the edge of the road.
3. This recommended threshold applies to those areas impacted by the approved flight paths

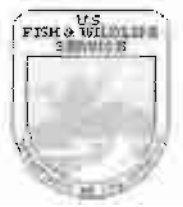
Source: TRPA Goals and Policies (adopted 1986)

Appendix G: USFWS Letter and Special Status/Special Interest Species Table

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825



July 18, 2006

Document Number: 060718050656

Tamara Sasaki
California Department of Parks and Recreation, Sierra District Resources Office
P.O. Box 16
Tahoe City, CA 96145

Subject: Species List for Hardwoods Restoration and Enhancement

Dear: Interested party

We are sending this official species list in response to your July 18, 2006 request for information about endangered and threatened species. The list covers the California counties and/or U.S. Geological Survey 7½ minute quad or quads you requested.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area *and also ones that may be affected by projects in the area*. For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

Please read Important Information About Your Species List (below). It explains how we made the list and describes your responsibilities under the Endangered Species Act.

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be October 18, 2006.

Please contact us if your project may affect endangered or threatened species or if you have any questions about the attached list or your responsibilities under the Endangered Species Act. A list of Endangered Species Program contacts can be found at [illegible].

Endangered Species Division

Federal Endangered and Threatened Species that Occur in
or may be Affected by Projects in the Counties and/or
U.S.G.S. 7 1/2 Minute Quads you requested
Document Number: 060718050656
Database Last Updated: May 5, 2006

Species of Concern - The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. See for more information and links to these sensitive species lists

Red-Legged Frog Critical Habitat - The Service has designated final critical habitat for the California red-legged frog. The designation became final on May 15, 2006. See our .

Species

Listed Species

Fish
Hypomesus transpacificus
delta smelt (T)

Oncorhynchus (=Salmo) clarki henshawi
Lahontan cutthroat trout (T)

Birds
Haliaeetus leucocephalus
bald eagle (T)

Candidate Species

Amphibians
Bufo canorus
Yosemite toad (C)

Rana muscosa
mountain yellow-legged frog (C)

Mammals
Martes pennanti
fisher (C)

Plants
Rorippa subumbellata
Tahoe yellow-cress (C)

Selected Quads

SOUTH LAKE TAHOE (5228) EMERALD BAY (523A) ECHO LAKE (523D) KINGS BEACH (538A) TAHOE CITY (5388) HOMEWOOD (538C) MEEKS BAY (538D)

County Lists

No county species lists requested.

Key:

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the jurisdiction of the . Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service

(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey . The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the nine surrounding quads through the California Native Plant Society's online

Surveying

Some of the species on your list may not be affected by your project. A trained biologist or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list.

For plant surveys, we recommend using the . The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal

> Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal with the Service

  During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

  Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our for maps.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be October 16, 2006.

List of Animals and Plants that Warrant Consideration

Common Name	Scientific Name	Status[1-5]	Habitat Description	Effect
Amphibians				
California red-legged frog [most areas in CA]	*Rana aurora draytonii*	SSC, FT	Dense, shrubby riparian vegetation associated with deep, still, or slow-moving water.	NO EFFECT--No habitat present.
Mountain yellow-legged frog [north of Tehachipi mtns]	*Rana mucosa*	SSC,FC,SS	Inhabits ponds, tams, lakes, and streams at moderate to high elevations. Occupies gentle sloping banks of open streams and lake margins of montane regions. Requires deep water pockets for winter hibernation.	MAY EFFECT--Habitat is present. Qualified biologist will survey work areas in suitable habitat and near water in Washoe Meadows State Park prior to work commencement.
Northern Leopard frog	*Rana pipiens*	SSC, FC,SS	Aquatic habitat used for oviposition and overwintering in the vicinity of dense, relatively tall, grass- or forb- dominated habitat with a moist substrate for foraging during the active season.	NO EFFECT--Possible exotic. Presumed to be extirpated from the basin based on a lack of sightings in the past 30 years[6].
Yosemite toad	*Bufo canorus*	SSC,FC	Found in high montane and subalpine associations in meadows surrounded by forests of lodgepole pine or whitebark pines. Suitable breeding sites are generally found at the edges of meadows or slow, flowing runoff streams. Uses mammal burrows to overwinter.	NO EFFECT--Two records of occurrence in the Lake Tahoe Basin vicinity appear to be misidentifications[7]. No record of occurrence in the Basin[6].
Birds				
American Peregrine Falcon	*Falco peregrinus anatum*	SE,MIS,TRPA	Open country adjacent to cliffs and escarpments. Nesting often occurs on cliffs overlooking riparian, wetland, and agricultural fields.	NO EFFECT--Presumed to be extirpated from the basin based on a lack of sightings in the past 30 years[6].
Bald Eagle	*Haliaeetus leucocephlus*	SE,T,MIS,TRPA	Nests within 1 mi of and winters at ocean shore, lake margins, and rivers. Nests in large old growth or dominate tree with open branches.	NO EFFECT--Closest reported location is Emerald Bay. Work will be conducted after nesting and fledging.
Bank swallow	*Riparia riparia*	ST	Overwinters in South American and returns to California to breed and nest. Needs vertical bluffs or riverbanks of fine soil to dig their burrows and nest in colonies.	NO EFFECT--Last observed in 1987 in South Lake Tahoe.
Blue Grouse	*Dendragapus obscurus*	MIS	Inhabits mature conifer stands interspersed with open brush and open grasslands close to water.	NO EFFECT--Project work will be implemented after breeding, nesting, and fledging has occurred.
California Spotted Owl	*Strix occidentalis occidentalis*	SSC,FBCC,MIS,SS	Lives in heavily forested areas with complex stand structure, typically with dense canopy cover.	**MAY EFFECT–**Present at Burton Creek and Ed Z'berg Sugar Pine Point SPs. Surveys for breeding/nesting territories conducted annually. 1/4 mile buffer of no project activity if present.
Golden Eagle	*Aquila chrysaetos*	SSC,FBCC,SS,TRPA	Found in open terrain of mountains, foothills, sagebrush, and grassland habitats. Builds nest of sticks on cliffs or in trees.	NO EFFECT--Observed but not known to nest in the Lake Tahoe Basin.
Great Gray Owl	*Strix nebulosa*	SE,SS	Inhabits dense forests interspersed with open meadows, clearings, or bogs.	NO EFFECT--Not observed in Lake Tahoe Basin[6].
Mallard	*Anas platyrhynchos*	MIS	Occupies a variety of aquatic habitats including ponds, lakes, emergent wetlands, and rivers.	NO EFFECT--Project work will be implemented after breeding, nesting, and fledging has occurred.
Northern Goshawk	*Accipiter gentilis*	SSC,FC,MIS,SS,TRPA	Prefers coniferous forests but found in decidious and other forests.	**MAY EFFECT**--Present at Burton Creek and Ed Z'berg-Sugar Pine Point State Parks. Surveys for breeding/nesting territories conducted annually. 1/4 mile buffer of no project activity if present.
Osprey	*Pandion haliaetus*	SSC, TRPA	Lives at lakes, rivers, and oceans. Nests in snags, trees, and man-made platforms in vicinity of water bodies.	NO EFFECT--No habitat present. Nests along Lake Tahoe shoreline at D.L.Bliss SP.
Pileated woodpecker	*Dryocopus pileatus*	MIS	Occupies mature conifer and decidious forests with snags that it uses to roost and nest.	NO EFFECT--Only live conifer trees being removed. Project work will be implemented after breeding, nesting, and fledging has occurred.
Willow Flycatcher	*Empidonax traillii*	SE,MIS,SS	Montane meadows with willow and willow riparian habitats with standing or flowing water.	NO EFFECT--Present at Burton Creek State Park in 2004. Project work will be implemented after breeding, nesting, and fledging has occurred.
Yellow Warbler	*Dendroica petechia brewsteri*	SSC	Nests and forages in riparian areas prefering willows, cottonwoods, aspen, sycamores, alders, and montane shrubs in open conifer forest	NO EFFECT-- Project work will be implemented after breeding, nesting, and fledging has occurred.

List of Animals and Plants that Warrant Consideration

Common Name	Scientific Name	Status[1-5]	Habitat Description	Effect
Waterfowl (open-water associated species)		TRPA	Open water	NO EFFECT--No habitat present.
Fish				
Brook Trout	*Salvelinus fontinalis*	MIS	Introduced species that inhabits clear cold lakes and streams.	MAY EFFECT--Project work will be implemented with BMPs to minimize effects to streams and waterways.
Central Valley fall/late fall-run chinook salmon	*Oncorhynchus tshawytscha*	SSC,FC	Reproduction occurs in fresh water habitats characterized by clear, cold and fast moving waters with cobble or gravel substrate in coastal streams and central valley watersheds.	NO EFFECT--Not present in Lake Tahoe watershed.
Central Valley spring-run chinook salmon	*Oncorhynchus tshawytscha*	ST,FT	Primarily found in four tributaries to the Sacramento River: Butte, Big Chico, Deer, and Mill creeks. Dependent on pools of water with bubblecurtain, underwater rocky ledges, and shade.	NO EFFECT--Not present in Lake Tahoe watershed.
Central Valley winter-run chinook salmon, Sacramento River	*Oncorhynchus tshawytscha*	FE	Reproduction occurs in fresh water habitats characterized by clear, cold and fast moving waters with cobble or gravel substrate in coastal streams and central valley watersheds.	NO EFFECT--Not present in Lake Tahoe watershed.
Central Valley Steelhead, Northern CA ESU	*Oncorhychus mykiss*	SSC,FT	Reproduction occurs in fresh water habitats characterized by clear, cold and fast moving waters with cobble or gravel substrate in coastal streams and central valley watersheds.	NO EFFECT--Not present in Lake Tahoe watershed.
Delta Smelt	*Hypomesus transpacificus*	ST,FT	Only occurs in San Francisco estuary and Sacramento-San Joaquin delta. Reproduces and rears in freshwater	NO EFFECT--Not present in Lake Tahoe watershed.
Lahontan Cutthroat Trout	*Oncorhynchus clarki henshawi*	FT,MIS,TRPA	Reproduce and rear in streams and juvenile and adults live in lakes or stream habitats. Historically in all accessible cold waters of Lahontan Basin in a wide variety of water temperatures and conditions. Cannot tolerate presence of other salmonids.	NO EFFECT--Not in project area streams.
Lahontan Lake Tui Chub	*Gila bicolor pectinifer*	SSC,SS	Inhabit large, deep lakes. Needs algal beds in shallower water for spawning, egg hatching, and larval development. Status in Lake Tahoe uncertain.	NO EFFECT--Not in project area streams.
Rainbow Trout	*Salmo gairderi*	MIS	Abundant and widespread distribution. Reproduce and rear in cool, clear, fast-flowing permanent streams and rivers. Juvenile and adults live in lakes or stream habitats.	MAY EFFECT--Project work will be implemented with BMPs to minimize effects to streams and waterways.
Mammals				
American Marten	*Martes americana*	FC,SS	Found in mixed evergreen forests with over 40% crown closure in the Sierra Nevada and Cascade mountains. Needs a variety of different aged stands, particularly old growth conifers and snags that provide cavities for dens.	NO EFFECT-- Project work will be implemented after breeding, denning, and dispersal has occurred.
black bear	*Ursus americanus*	MIS	Prefers mesic forest and shrub areas. Uses dense cover for hiding, thermal protection, and bedding. Dens in tree hollows and cavities; under logs and rocks; and in stumps, banks, caves, culverts, or uprooted trees	NO EFFECT-- Project work will be implemented after breeding, denning, and dispersal has occurred.
California wolverine	*Gulo gulo luteus*	ST,FSC,SS	Mixed conifer, red fir, and lodgepole. Probably uses subalpine conifer, alpine dwarf-shrub, wet meadow, and montane riparian habitats. Prefers low human disturbance. Uses caves, hollows in cliffs, logs, rockout crops, and burrows for cover general in d	NO EFFECT--Presumed to be extirpated from the basin based on a lack of sightings in the past 30 years (Schlesinger and Romsos 2000)
fisher	*Martes pennanti*	SSC,FC	Intermediate to large-tree stages of coniferous forest and deciduous riparian areas with high percentage of canopy closure. Uses cavity snags, logs, and rocky areas for cover and denning. Needs large areas of mature dense forest.	NO EFFECT-- Project work will be implemented after breeding, denning, and dispersal has occurred.
mule deer	*Odocoileus hemionus*	MIS,TRPA	Early to intermediate seral forest, woodland, and brush habitats. Prefers mosaic of various aged vegetation that provides woody cover, meadow and shrub openings, and available water.	NO EFFECT-- Project work will be implemented after breeding and dispersal has occurred.

List of Animals and Plants that Warrant Consideration

Common Name	Scientific Name	Status[1-5]	Habitat Description	Effect
Sierra Nevada mountain beaver	*Aplodontia rufa californica*	SSC,FSC	Prefers willow/alder or aspen thickets bordering streams or wet meadows.	**MAY EFFECT**--Present at D.L. Bliss and Ed Z'berg Sugar Pine Point State Parks. Will flag and avoid known mountain beaver areas. Removal of encroaching conifers in riparian forest will enhance habitat and perpetuate this species.
Sierra Nevada red fox	*Vulpes vulpes necator*	ST,SS	Uses a wide range of habitats including alpine dwarf-shrub, wet meadow, subalpine conifer, lodgepole pine, red fir, aspen, montane chaparral and riparian, mixed conifer, and Jeffrey and ponderosa pine forests. Prefers forest interspersed with meadows or	NO EFFECT--Presumed to be extirpated from the basin based on a lack of sightings in the past 30 years (Schlesinger and Romsos 2000)
Townsend's western big-eared bat	*Corynorhinus townsendii*	SSC,SS	Found in all habitats except subalpine and alpine. Most abundant in mesic areas of habitats. Requires caves, mines, tunnels, buildings, or other man-made structures for individual and maternity roosts.	NO EFFECT--Removal of conifers may improve foraging areas in mesic areas. No roosts will be affected.
Plants				
American mannagrass	*Glyceria grandis*	CNPS2.3	Found in freshwater wetlands, bogs and fens, meadows and seeps, and along streambanks and lake margins. Elevation range 50- 6534 ft. Blooms June-August.	**MAY EFFECT–**Habitat present is treatment areas. Qualified botanist will survey work areas prior to start of work. If plant found to be present, the area will be flagged and avoided.
common moonwort	*Botrychium lunaria*	SS,CNPS2.3	Meadows and seeps, subalpine coniferous forest, and upper montane coniferous forest. Elevation range 7524-11,220 ft. Fertile August.	**MAY EFFECT**-- Habitat present is treatment areas. Qualified botanist will survey work areas prior to start of work. If plant found to be present, the area will be flagged and avoided.
Cup Lake draba	*Draba asterophora var. macrocarpa*	SS,CNPS1B.3,TRPA	Inhabits subalpine coniferous forest in rocky areas. Elevation range 8250-9290 ft. Blooms July-August.	NO EFFECT--No habitat present.
Donner Pass buckwheat	*Eriogonum umbellatum var. torreyanum*	SS,CNPS1B.2	California endemic. Occurs in meadows and seeps and upper montane coniferous forest in rocky volcanic areas. Elevation range 6122-8650 ft. Blooms July-September.	NO EFFECT--No habitat present.
Galena Creek rockcress	*Arabis rigidissima var. demota*	SS,CNPS1B.2,TRPA	Broadleaf upland forest and rocky upper montane coniferous forest. Elevation range 7442-8448 ft. Blooms in August.	NO EFFECT--No habitat present.
Hutchinson's lewisia	*Lewisia kelloggii ssp. hutchisonii*	SI, CNPS3.3	California endemic. Upper montane coniferous forest in openings and slate. Elevation range 4828-7046 ft. Blooms (June) July-August.	NO EFFECT--No habitat present.
Kellogg's lewisia	*Lewisia kelloggii ssp. kelloggii*	SS	Yellow pine and red fir forests in open areas on well drained, coarse textured granitic and volcanic soils of ridgelines. Elevation range 4500-7700 ft.	NO EFFECT--No habitat present.
long-petaled lewisia	*Lewisia longipetala*	SS,CNPS1B.3,TRPA	California endemic. Alpine boulder and rock field, subalpine coniferous forest in mesic rocky granitic sites in cracks of granite or gravelly volcanic soils. Elevation range 8250-9652 ft. Blooms July-August.	NO EFFECT--No habitat present.
marsh skullcap	*Scutellaria galericulata*	CNPS2.2	Occurs in lower montane coniferous forest, mesic meadows and seeps, and marshes and swamps. Elevation range 0-6930 ft. Blooms June-September.	**MAY EFFECT**--Present at Washoe Meadows State Park. Qualified botanist will survey and if found, flag plant locations for avoidance prior to start of work in area. Removal of encroaching conifers will maintain open meadow and enhance this species habitat
Mingan moonwort	*Botrychium minganense*	SS, CNPS2.2	Found in lower montane coniferous forest and in mesic areas of upper montane coniferous forest. Elevation range 4950-6782 ft. Fertile July-September.	**MAY EFFECT**--Known occurrence near Kings Beach. Habitat present is treatment areas. Qualified botanist will survey work areas prior to start of work. If plant found to be present, the area will be flagged and avoided.
Munroe's desert mallow	*Sphaeralcea munroana*	CNPS2.2	Great Basin scrub. Elevation range 6600 ft. Blooms May-June	NO EFFECT--No habitat present.
slender-leaved pondweed	*Potamogeton filiformis*	CNPS2.2	Shallow freshwater marshes and swamps. Elevation range 990-7095 ft. Blooms May-July.	NO EFFECT--No habitat present.
slender moonwort	*Botrychium lineare*	SS, CNPS1B.3	Upper montane coniferous forest. Elevation range 8580ft. Unknown when blooms. Known from one occurrence in eastern California	NO EFFECT--No habitat present.

List of Animals and Plants that Warrant Consideration

Common Name	Scientific Name	Status[1-5]	Habitat Description	Effect
scalloped moonwort	*Botrychium crenulatum*	SS,CNPS2.2	Habitats include bogs and fens, lower montane coniferous forest, meadows and seeps, and freshwater marshes and swamps. Elevation range 4950-10824 ft. Fertile June-September.	**MAY EFFECT**--Known occurrence in Blackwood Canyon. Habitat present is treatment areas. Qualified botanist will survey work areas prior to start of work. If plant found to be present, the area will be flagged and avoided.
shore sedge	*Carex limosa*	CNPS2	Found in bogs and fens, lower montane coniferous forest, meadows and seeps, marshes and swamps, and upper montane coniferous forest habitats. Elevation range 3960-8910 ft. Blooms June-August.	NO EFFECT--Present at Ed Z'berg-Sugar Pine Point and Washoe Meadows State Parks. Fens and wet meadows will be avoided.
short-leaved hulsea	*Hulsea brevifolia*	SS,CNPS1B.2	California endemic. Occupies lower and upper montane coniferous forests in granitic or volcanic soils with gravelly or sandy substrates in forest openings and road cuts. Elevation 4950-10,560 ft. Blooms May-August	NO EFFECT--No habitat present.
Sierra sedge	*Carex mariposana, formerly C. paucifructus*	TRPA	In the 2001 Threshold update, this plant species was recommended to be removed from the Threshold list and therefore, not considered	NO EFFECT--No longer listed as TRPA Threshold.
starved daisy	*Erigeron miser*	SS,CNPS1B.3	California endemic. Rocky upper montane coniferous forest. Elevation range 6072-8646 ft. Blooms June-October.	NO EFFECT--No habitat present.
subalpine fireweed	*Epilobium howellii*	SS,CNPS1B.3,TRPA	California endemic. Meadows and seeps and mesic subalpine coniferous forest. Elevation range 6600-8910 ft. Blooms July-August.	**MAY EFFECT**--Habitat present is treatment areas. Qualified botanist will survey work areas prior to start of work. If plant found to be present, the area will be flagged and avoided.
Tahoe draba	*Draba asterophora var. asterophora*	SS,CNPS1B.3,TRPA	Inhabits alpine boulder and rock fields in subalpine coniferous forest areas. Elevation range 8250-11,567 ft. Blooms July-September.	NO EFFECT--No habitat present.
Tahoe yellow cress	*Rorippa subumbellata*	SE,FC,SS,CNPS1B.1,TRPA	Inhabits shoreline around Lake Tahoe in lower montane coniferous forest in wet meadows adjacent to decomposed granitic sand and/or rock cobble beaches and along sandy creek banks close to the lake. Elevation range 6223-6280 ft. Blooms May-September.	NO EFFECT--Present at Ed Z'berg-Sugar Pine Point State Park. Plants are enclosed in fence and signed. This area will be avoided.
Tiehm's rock cress	*Arabis tiehmii*	SS,CNPS1B.3	Alpine boulder and rock field. Elevation range 9801-11,847 ft. Blooms July-August.	NO EFFECT--No habitat present.
unswept moonwort	*Botrychium ascendens*	SS,CNPS2.3	Occupies lower montane coniferous forests. Elevation range 4950-7541 ft. Fertile July-August.	**MAY EFFECT**--Habitat present is treatment areas. Qualified botanist will survey work areas prior to start of work. If plant found to be present, the area will be flagged and avoided.
Washoe tall rockcress	*Arabis rectissima var. simulans*	SI	Late seral Jeffrey pine/white fir forests in dry, deep, sandy granitic or andesitic soils on gentle slopes. Elevation range 6035-7335 ft.	NO EFFECT--No habitat present.
water bulrush	*Scirpus subterminalis*	CNPS2.3	Bogs and fens, marshes and swamps, and lake margins of montane lakes. Elevation range 2475-7425 ft. Blooms July-August.	**MAY EFFECT**--Habitat present is treatment areas. Qualified botanist will survey work areas prior to start of work. If plant found to be present, the area will be flagged and avoided.
western goblin	*Botrychium montanum*	SS,CNPS2.1	Found in lower and mesic upper montane coniferous forests. Elevation range 4950-7029 ft. Fertile July-September.	**MAY EFFECT**--Habitat present is treatment areas. Qualified botanist will survey work areas prior to start of work. If plant found to be present, the area will be flagged and avoided.
Moss				
Bolanders candle moss	*Bruchia bolanderi*	SS,CNPS2.2	Lower montane coniferous forest, marshes and seeps, and upper montane coniferous forest with damp soil. Elevation range 5610-9240 ft.	**MAY EFFECT**--Habitat present is treatment areas. Qualified botanist will survey work areas prior to start of work. If plant found to be present, the area will be flagged and avoided.
broad-nerved hump-moss	*Meesia uliginosa*	SS,CNPS2.2	Found in meadows and seeps and upper montane coniferous forest in damp soil of meadows. Elevation range 4290-8250 ft.	**MAY EFFECT**--Habitat present is treatment areas. Qualified botanist will survey work areas prior to start of work. If plant found to be present, the area will be flagged and avoided.

List of Animals and Plants that Warrant Consideration

Common Name	Scientific Name	Status[1-5]	Habitat Description	Effect
three-ranked hump-moss	*Meesia triquetra*	SS,CNPS2.2	Found in upper montane coniferous forest with mesic soil, bogs and fens, and meadows and seeps. Elevation range 4290-8250 ft.	NO EFFECT--Present at Ed Z'berg-Sugar Pine Point and Washoe Meadows State Parks. Fens will be avoided.
Lichens				
veined water lichen	*Hydrothyria venosa*	SS	An aquatic lichen that grows on rock substrate in cold and clear perennial mountain streams and springs. Elevation range 1150-7000 ft.	No EFFECT--No known occurrences to date in Lake Tahoe Basin. Qualified botanisit will survey work areas prior to start of work. If plant is present, the area will be flagged and avoided.
Plant Community				
Aspen	*Populus tremuloides*	TRPA	Mesic sites in lodgepole pine or mixed conifer forests, talus slopes, chaparral areas.	**MAY EFFECT**--Project will remove conifers encroaching on aspen stands. Will improve habitat for aspen stands and perpetuate the species.
Fen			Wetlands, typically occupying sites sub-irrigated by cold water. Plant growth dense and low growing, dominated by perennial herbs or low shrubs. Saturated soils frequently allow substantial accumation of "peat"	NO EFFECT--Present at Ed Z'berg-Sugar Pine Point and Washoe Meadows State Parks. Fens will be avoided.

State = California Department of Fish and Game
SE = endangered species
ST = threatened species
SSC = special species of concern

Federal = United States Fish and Wildlife Service or NOAA Fisheries
FE= endangered species
FT = threatened species
FC = candidate species

LTBMU = United States Forest Service, Lake Tahoe Basin Management Unit
MIS = Management Indicator Species (any species of plant or animal identified as a representative for a group of species with special habitat requirements.)
SS = United States Forest Service, Lake Tahoe Basin Management Unit, Sensitive Species (any species of plant or animal recognized by the Regional Forester to need special management in order to prevent them to become threatened or endangered.)
SI = Species of Interest for LTBMU 2006, Shana Gross 8/06.

CNPS1B = California Native Plant Society list 1b: Plants rare, threatened, or endangered in California or elsewhere
CNPS2 = California Native Plant Society list 2: Plants rare, threatened, or endangered in California, but more common elsewhere
CN{S3 = California Native Plant Society list 3: Plants about which we need more information--a review list
CNPS4 = California Native Plant Society list 4: Plants of limited distribution--a watch list

0.1= Seriously endangered in California
0.2=Fairly endanger in California
0.3=Not very endangered in California

TRPA = Tahoe Regional Planning Agency, TRPA 2001 Threshold Evaluation Report, Ch.5: Vegetation, Ch. 6: Fisheries, Ch. 7: Wildlife; 7/02

[1] = State and Federally Listed Endangered and Threatened Animals of California 2/2006 and California's Plants and Animals o
Special Concern, California Department of Fish and Game, 2003.

[2] = United States Fish and Wildlife Service, Sacramento Field Office, Federal Endangered and Threatened Species that occur in or may be affecte
by Projects in the Countis and/or USGS 7.5 minute Quads you requested, Lake Tahoe Basin Management Area, and Lake Tahoe Basin Region (8/06)

[3] = Lake Tahoe Basin Management Unit, www.fs.fed.us/r5/ltbmu/about/wildlife; 8/11/06; and Shana Gross 8/0

[4] = Tahoe Regional Planning Agency 2001 Threshold Evaluation Report 7/02; DFG Special Animals List and Special Plants List, 8/0

[5] = California Natural Diversity Database, Rarefind 3.0.5, Element Occurrences for Echo Lake (EL), Emerald Bay (EB), Homewood (HW), Kings Beach (KB
Meeks Bay (MB), Rockbound Valley (RV), and Tahoe City (TC) USGS quadrangles (queried 8/06)

[6]= Schelsinger, M.D. and J. Shane Ramsos. 2000. Appendix G Vertebrate Species of the Lake Tahoe Basin in Lake Tahoe Watershed Assessment: Volume II. Appendixes. USDA. General Technical Report PSW-GTR 17

[7]= Jennings, M.R., M.P. Hayes, & Research Section, Animal Management Division, Metro Washington Park Zoo. 1994. Amphibian and Reptile Species of Special Concern. Report prepared for Calif. Dept. of Fish and Gam